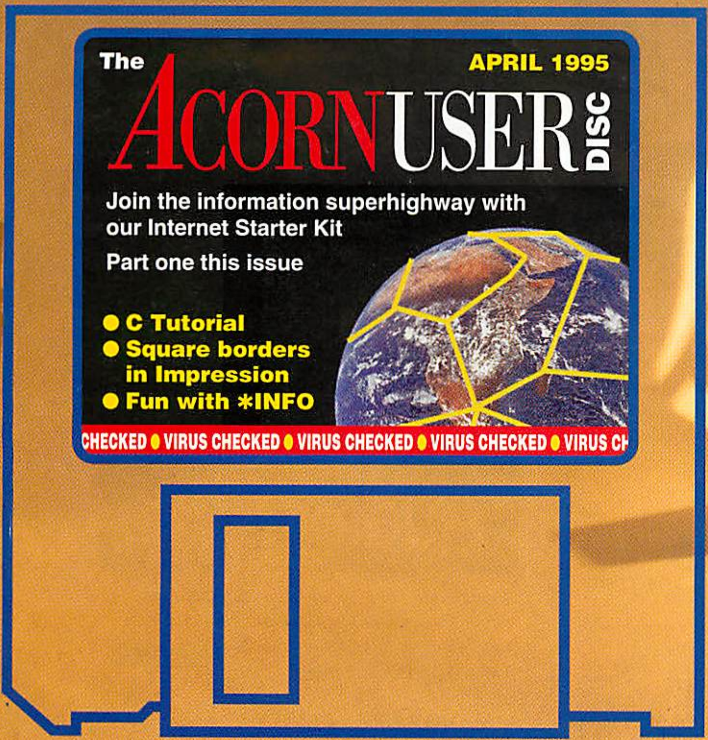
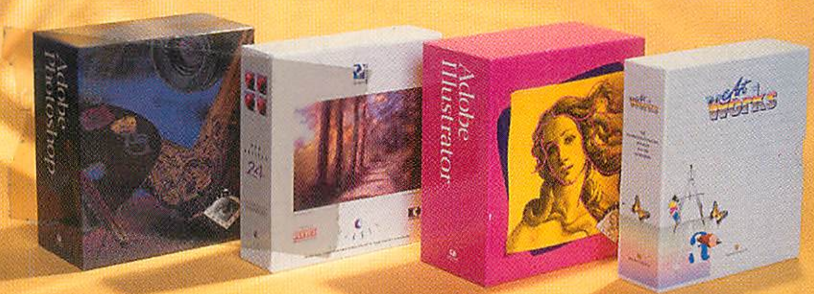
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100 frame border designs for Impression Publisher or Impression Style.
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ARTWORKS REVIEWS:

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"ArtWorks is a great package, full stop."
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CLIP-ART CD



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AUDIOWORKS REVIEW:

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A utility to read and write to Apple Mac SuperDrive floppies and via a SCSI interface, hard discs, Syquests and optical drives. RISC OS 3.1 required.
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If you need some good 24 bit colour images, this software will allow you to load JPEG compressed files, PhotoCD images, TIFF and Clear files into Impression Style, Publisher and ArtWorks 1.5. Includes sample JPEG images. *£39.00 + VAT (£45.82 inc)*

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the Acorn RISC computers

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Graphics accelerator expansion card. Provides much higher resolution, more colours, less flicker (higher refresh rates) and faster graphics drawing. 32,000 colour screen modes and video pass-through for Acorn modes. If your RISC OS desktop is becoming cluttered, how about upgrading to a screen size of 1600 pixels across. Compatible with A300, 400, 540 and A5000 computers.
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GOLD REVIEW:

"I don't know how I ever survived all those hours squinting and scrolling..."
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ScanLight 256

The very popular hand-held scanner capable of scanning 256 grey-levels for photographic quality image capture. The best way to get pictures into your computer. Includes internal expansion card. Versions available for all Acorn computers - so please specify model of computer when ordering.

A300/400/5000/Risc PC: £159 + VAT (£186.82 inc). A30X0/4000 mini podule: £169 + VAT (£198.57 inc). HCCS Ultimate MicroPodule £229.00 + VAT (£269.07 inc).

SCANLIGHT 256 REVIEW:

"Really impressive.
A stable, well made product."
ARCHIVE

ScanLight Video



A combination of ScanLight 256 greyscale hand scanner, and real-time 256 greyscale video digitising, on a single card.
£220 + VAT (£258.50 inc).

SCANLIGHT VIDEO REVIEW:

"Excellent quality..."
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High quality flatbed A4 256 grey-level scanner and ScanLight image processing software. Requires Acorn compatible SCSI interface card.
£499 + £10 p&p + VAT (£598.07 inc).

PROFESSIONAL REVIEW:

"This really is a professional level tool."
ACORN USER

ScanLight Professional Colour



New high quality 24-bit full colour flatbed A4 scanner. Special bundle includes the stunning Spacetech Photodesk retouching program, worth £198. 4Mbyte min. 8Mbytes or more recommended. Requires Acorn compatible SCSI interface card (available as optional extra).
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Chroma Genlock

A range of genlocks from Wild Vision which can be used to overlay and record to video any computer graphics.

CG3 for A30X0, A4000; CG4 for A300/400/500 series; CG5 for A5000 and CG6 for Risc PCs.
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Canon Colour Printers



360dpi printing (40% higher than HP printers), vivid colour and unlike some colour printers, absolutely no problem mixing black and colours together. Separately replaceable colour ink cartridges. Includes RISC OS 3 TurboDrivers and cable.
BJC-600 A4 printer £389 + £10 p&p + VAT (£468.82 inc). BJC-800 A3 printer £1199 + £10 p&p + VAT (£1420.57 inc).

BJC-600 REVIEW:

"A very impressive package, worthy of our Best Buy rating."
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Canon Mono Printers

Fast, 360 dpi, inkjet printer. Includes TurboDriver software to provide the fastest inkjet printing of any printer in its class. Printer has built-in sheet feeder and power-supply. Includes printer cable.
BJ-200 A4 printer £229.00 + £10 p&p + VAT (£280.82 inc).
BJ-230 A3 printer £289.00 + £10 p&p + VAT (£351.32 inc).

BJ-200 REVIEW:

"All in all, this is a splendid piece of kit."
ARCHIMEDES WORLD

Pioneer CD ROM drives



Holds 6 CDs and includes automatic disc changer. PhotoCD compatible. Includes driver software for all Acorn compatible SCSI interface cards, compatible with AUN networks. Two versions available, the 604X is four times normal speed (600K sec) and the 602X is twice normal speed (300K sec). CDFS 2.2 required.
604X - £999 + £10 p&p + VAT (£1185.57 inc).
602X - £499 + £10 p&p + VAT (£598.07 inc).

EAGLE M2

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Including the Eidos real-time video compression software: £329 + £6 p&p + VAT (£393.62 inc).

EAGLE REVIEW:

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ARCHIMEDES WORLD

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CONTENTS

Editor's letter

Welcome to the first issue of *Acorn User* incorporating *Acorn Computing.* Readers of *Acorn Computing* will notice a number of writers from the magazine writing for *Acorn User*, and for those of you who didn't read our sister magazine, you'll notice an influx of talented reviewers, games players and writers. Next month we'll be adding Mike Cook to our collection of regular columnists: he had an article published in every single issue of *Micro User* and *Acorn Computing*, and will be exploring the wonderful world of computer electronics from the May issue onwards.

In the meantime, enjoy the combination of *Acorn Computing* and *Acorn User*.

Mark Moxon, Editor

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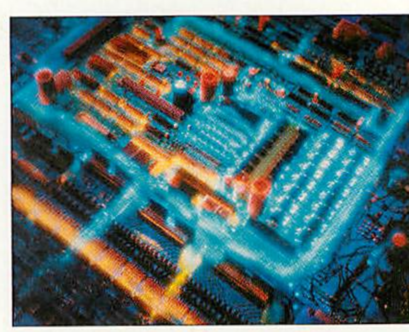
Published by IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP
e-mail mark@acornusr.demon.co.uk
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Duncan Web Offset, Maidstone

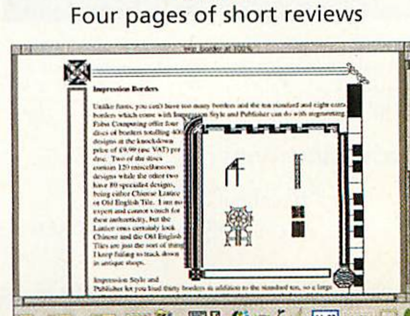
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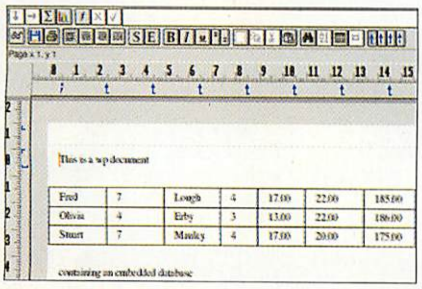




April 1995

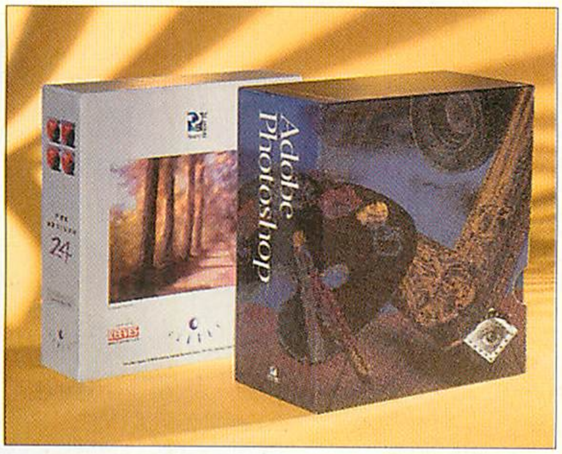
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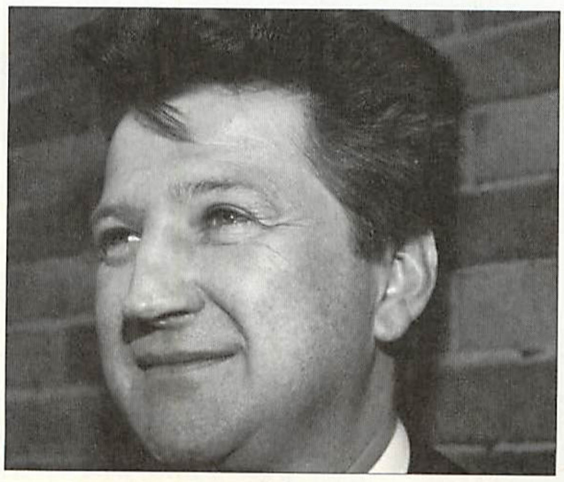












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A3020 / A4000 2 - 4 Mb	IFEL	£72
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Bargain basement

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Access for A3020/A4000	ACOR	£129
Atelier, KS2-4	MINE	£22
Axis	TBAO	£14
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486 PC Card 25 MHz Bare	ALEP	£315
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486 PC Card 50 MHz 8 Mb	ALEP	£629
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Power Pad (Dual)	ECLI	£29
Power Pad (Single)	ECLI	£22
RISC OS 3 Bulk Software Upgrade Kit (set of 10)	ACOR	£319
RISC OS 3 Software Upgrade Kit	ACOR	£77
ScanLight Video 256	COMC	£194
ScanLight Video 256 A3000/A4000	COMC	£194
TV Tuner with Teletext	COMC	£154
Vision 24 508 line A3000/3010/3020/4000 internal	HCCS	£129
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ICS

0151-625 1006

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You may also pay by ***credit card***, ***debit card*** or ***Switch***. We normally make ***no charge*** for this, and take no payment until goods are despatched. We need your address as known to the card issuer.

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Beebug home professional bundle



Beebug, in an impressive dealer initiative, offers its own software and hardware bundle

BEEBUG has taken the basic Acorn A3010 entry-level computer and equipped it with hardware upgrades and software to make it a useful and aggressively priced general-purpose home or small office computer system. An extra megabyte of memory, making a total of 2Mb has been added, along with an 80Mb hard drive.

The system also includes an Acorn AKF52 standard resolution multi-scan 14 inch monitor.

Software includes *Action Pack*, with the *Zool* game and *StartWrite* word processor, *Ovation DTP*, *Pipedream* spreadsheet/database from Colton Software, *Chartwell* graphs and charts, *Atelier* art package, *Typestudio* font application tool and David Pilling's *Chess* game. You also get a *RiscAction Games Disc*, which includes *Humanoids*, *Cretin*, *Shells*, *Robotix*, *Wrangler*, *Boffin* and *Sphere Zone*. Options include 4Mb RAM and an AKF50 higher resolution monitor. *Acorn Early Years*, *Learning Curve* and *Home Office* software packs can be added for extra cost too. The basic system price is £659 + VAT, representing at least £300 off the cost of all the individual items, according to Beebug.

Beebug Ltd,
Tel: (01727) 840303
Fax: (01727) 860263

Changes as core business posts another loss

IT COULDN'T have been a busier month for Acorn on the public relations front. On the negative side, 20 staff have been made redundant, including Peter Talbot, general manager of education, after it was revealed that Acorn's year-end figures included a large loss of £3.4 million and a turnover figure reduced by £3.9 million from £54.3 million to £50.4 million. Acorn also announced a one for three rights issue to raise £17.2 million to underpin Acorn Group finances and finance the new Online Media division.

On the plus side, Acorn enjoyed a £1.3 million share of ARM Ltd profits and Online Media produced a dazzling array of strategy and partnership announcements. Acorn is also to apply for a full stock exchange listing.

The puzzling question is just how did Acorn's fortunes continue to deteriorate in the second half of 1994? In the Christmas 1994 issue of *Acorn User*, our headline for news of Acorn's first half results was 'Acorn posts loss but outlook is bright.' Despite losing £2.2 million, turnover rose marginally to £23.7 million, even without revenues from the Risc PC. In the second half of the year, turnover slumped by £4 million, a reduction of 13 per cent. The associated loss was £1.2 million, £1 million less than the first half, and if you take into account £1.8 million spent on setting up Online Media, it shows that Acorn Computers Limited actually traded profitably in the second half.

If the Risc PC was doing as well as everyone had been thinking, why did Acorn's turnover drop so sharply? Based on various information gleaned from Acorn, we estimate at least 20,000 Risc PC systems have been shipped, most of which were bought in the last six months of Acorn's financial year. A rough calculation indicates that business alone was worth £15-20 million and must have been much higher than comparable sales of the A5000 a year earlier.

So sales of everything else, A3010/20, A4000, A4 portables, must have slumped dramatically. This is indeed confirmed by a statement obtained by *Acorn User* from Acorn's finance director, Gary Johnson: 'Sales of high-end products (i.e. A5000/Risc PC) were up on 1993 on both first and second-half figures. The decline in turnover is a result of the decline in primary spend in the market in general, affecting the A3020 and A4000; and in consumer spend, i.e. A3010.' Positive news comes from Henry Howarth, product manager for the Pocket Book range – he reports Pocket Books are more popular than ever and schools are buying many more bulk-purchase ClassPacks, representing a commitment to serious investment in the product.

So where does Acorn go from here? Risc PC prospects remain bright, hopefully boosted further by the arrival of the PC-compatible 486 co-processor upgrade, but replacements for the now-ageing lower-end product range and the even older A4 portable are desperately required. Acorn is remaining tight-lipped about any developments in this area.

There is enormous interest in Online Media, but this division will only consume further resources for the near future as it develops. It will be most interesting to see how successful the rights issue becomes. This asks existing shareholders to buy an additional share for every three they already hold. The price is 80p, about 10p off the currently traded share price, which was little-affected by the rights issue news. Olivetti will not be taking up its rights option and this will dilute Olivetti's stake from 78 per cent to under 60 per cent, which will give Acorn added independence from Olivetti.

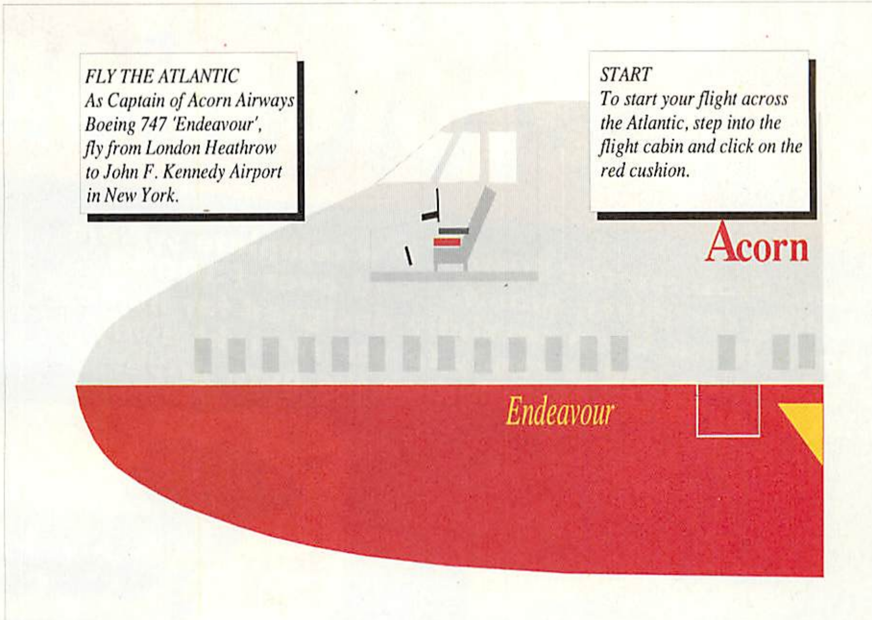
Inside Acorn Computers Limited specifically, three new operating divisions have been set up: Innovation and Development, for in-house product design and development, plus external and sourcing. Sales and marketing is the second division, much as before but minus its retail sales component, and the third division is Administration and Logistics to handled procurement, warehousing, finance and systems.

Topologika update

FRESH from its awards success at BETT (see other story) Topologika has released details of its latest offerings. *Fly the Atlantic* (£15 + VAT) is a Navigator activity pack which explores the flight of a modern airliner from the UK to the USA and involves Air Traffic Control, map reading skills and navigation and is written by a real airline pilot.

Mathmania (£25 + VAT) is a number game for children at key Stage 2, levels 3 and 4 to Key Stages 3 and 4. The package is completely configurable according to requirement and involves mazes, quizzes and puzzles. *Talking Clocks* (£35 + VAT) is for teaching time interpretation skills, covering traditional analogue clock faces and new digital displays. Digitised speech is used to enhance the computer's response. Users are asked to say the time displayed, set the clock to a required time, measure time differences and match tow sets of clocks.

Topologika
Tel/Fax: (01326) 377771.



Fly the Atlantic on the Acorn Airways' *Endeavour.*

Psion introduces better Series 3a

FOR a while, Acorn has arguably had the best version of the current crop of Psion Series 3a palmtop computers in its Pocket Book 2 version. For just slightly more money, the Pocket Book 2 included a full spelling checker and thesaurus. Now, Psion has cancelled that advantage by bundling the same spelling checker and thesaurus as well as a patience game, though there is a small catch – you have to buy one of their newly announced 1Mb and 2Mb RAM models.

512K and 256K Series 3a models won't get the bundled software, so Acorn can still say they have the best of this bunch. Henry Howarth at Acorn has also confirmed that Acorn is evaluating the new 3a with extra memory and it is likely Acorn will follow with new models later in the year.

Psion has also announced a package for linking Nokia 2110 GSM mobile phones to Series 3a computers in order to prepare and read SMS (short message service) messages. These are 160 character messages normally entered and read on the phone itself.

The new 1Mb 3a is priced £339.95 inc. VAT and the 2Mb version £399.95 inc. VAT. This compares with £329.95 inc. VAT for the 512K Pocket Book II.

Finally, there are rumours beginning to circulate that Psion has seen the light and is working on ARM-based products, something *Acorn User* has been lobbying Psion to do since the first Pocket Book appeared over two years ago.

Psion
Tel: (0171) 262 5580

Redundancies

ACORN has started the year both hiring and firing staff. The most surprising casualty was Peter Talbot, who headed up the education business unit or EBU. There had been little outward hint that Talbot was to be axed, though in the aftermath *Acorn User* has received some feedback from the industry that Talbot was too involved in strategy and not enough in selling computers. Mike O'Riordan, sales and marketing director, takes over Peter Talbot's responsibilities until a replacement is appointed.

Another senior name to go is sales manager Terry Shurwood, who has been with Acorn many years. Shurwood was a victim of the disbanding of the retail account team, which means that Acorn will no longer attempt to sell computers in retail stores as they had done with Rumbelows, for example. Some of the 20 staff made redundant have apparently applied for jobs at Online Media.

Meanwhile, Acorn has hired a new face to manage its family and home computing activities. Jason Laroche has become the personal computing marketing manager, joining Acorn from MMC Marketing & Communications, the company which which formerly handled ARM Ltd's public relations.

Former secondary school teacher, Dick Wallin, becomes secondary school sector marketing manager and Alan Bennett, previously a school IT coordinator, becomes primary school sector marketing manager.

BETT winners

CONGRATULATIONS to Northwest SEMERC, The Concept Keyboard Company, Crick Computing and Topologika, who all won Educational Computing and Technology awards for Acorn products at the recent BETT'95 education technology show at London's Olympia.

Crick won a gold award for its *Clicker* package, The Concept Keyboard, in association with Northwest SEMERC won a special needs silver for its Informatrix keyboard, Northwest SEMERC itself landed a bronze prize for *My World 2+2*, and Topologika won a primary school sector accolade for its *Music Box* package.



Trish Hornsey accepting an award for SEMERC

Prizes were handed out at the show by the Secretary of State for Education, Gillian Shepherd, who also attended the show.

Acorn criticised for C++ solution

ONE of the most popular moans you hear from Acorn third-party software developers is that they have no official C++ programming tools. Acorn recently announced its adoption of *CFront*, a compiler utility to translate conventional C programs into C++.

Acorn says *CFront*, invented by the the inventor of C++, Bjarne Stroustrup, has an established track record of use throughout the industry. That may be so, but when Acorn first supplied prototype *CFront* utilities to its developers some months ago, *Acorn User* detected some vocal negative feedback.

The quality of the code it produced was accused of being poor and it was difficult to persuade the system to work successfully with many programs. Acorn has undoubtedly refined its implementation of the *CFront* system since then, but what Acorn programmers really want is a true native C++ compiler with good RISC OS environment support.

Until then, some programmers say they will stick to what they know, putting in doubt the viability of *CFront*. David Pilling, one of the main exponents of C programming on the Acorn platform, commented: '*CFront* is going to be slow and I need the compiler to go fast. In fact I am sticking with Cv4 for now, because v5 is often a lot slower. I'll use v5 for production stuff.' David added: 'Unlike some people, I am not a fan of C++ in itself. If there was a good native C++ I'd probably use *some* C++ features.'

David says he welcomes the provision of good desktop development tools, but he doesn't think it should be seen as an instant fix to signal the porting of attractive alien platform applications. In his opinion, if people were really serious in doing this, they would have found a way of doing it anyway. On a positive note he says: 'One good thing about Cv5 is that it does produce faster/smaller code. So a simple recompile has given us *Ovation* and *Hearsay* five per cent smaller – a 32K page if you're lucky and a bit nippier. Try doing that with (ARM assembler coded) *Impression*...'

The question mark remains – who will want *CFront* and will it make a difference to the Acorn software scene?

Prophet 2

APRICOTE Studios will unveil the latest version of its *Prophet* accounting package at the Harrogate Spring *Acorn User* show. *Prophet 2* has been re-coded, is now smaller and faster but adds features like button bars, undo and redo, auto backup save, a new neater look and user interface, unlimited standing orders, compatibility with Silicon Vision *Payroll Manager* data, and drag and drop functionality. Window positions are also saved along with file data. Upgrades will cost existing users £35.25 inclusive – including a new manual, though the overall price remains un-changed at £170 + VAT.

Apricote Studios
Tel/Fax: (01354) 680432

School competition

If your school is intending to enter the *Acorn User* Schools' Competition, it's time to let us know you want to enter. If you could contact Geoff Preston at the usual editorial address with details of your school, we would be most grateful.

OM success

A deal to supply at least 125,000 interactive set top boxes (STBs) has been signed by Online Media with Viewcall Europe Plc. Viewcall intends to launch an interactive information and communication service which will work over existing telephone networks, a key advantage over cable TV companies which still have small network penetration. Fractal compression will be used to squeeze image data down telephone lines. Viewcall's fractal compression engine has already been ported to an ARM7500-based version of the Online Media STB. Services will include electronic shopping, banking services, advertising and e-mail.

ANT location

In last month's *Acorn User* the comms page gave details of the forthcoming *ANT Internet Suite* which provides full e-mail, WWW and ftp access to the Internet. Interest in this product was understandably great, but unfortunately we left off the contact details for ANT. Here they are: Tel: (01223) 567801, Fax: (01223) 567808, E-mail: sales@ant.co.uk WWW: http://www.ant.co.uk/

Simtec RAMs

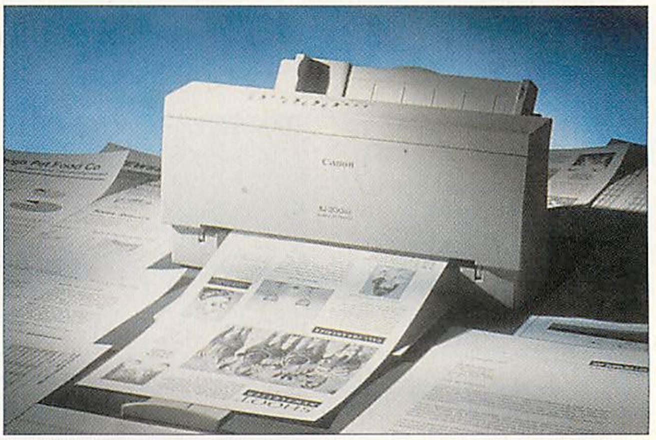
To correct a false impression left by last month's review of Simtec's upgradeable Risc PC memory upgrades, the 16Mb/32Mb SIMMs are already available, and have been since last April. Prices are £450 + VAT for the 16Mb module, £450 + VAT for the 16–32Mb upgrade and £900 for the full 32Mb module.

Simtec Electronics
Tel: (01772) 812863

Canon revamps BJ200 bubblejet

CANON has revised the specification of the popular monochrome BJ200e bubblejet printer. We'd like to tell you what the new BJ200ex has to offer over its predecessor, but details are sketchy beyond the new model being easier to use and slightly faster. However, we do know its recommended price is £259 and its monochrome print head can make over 6,200 bubbles every second.

Canon UK Ltd
Tel: (0181) 773 3173
Fax: (0181) 773 218?



Canon's cheap and bubbly BJ200ex

Fotoman Pixura

REMEMBER that rather odd upright Logitech Fotoman digital camera from a couple of years back? It snapped relatively low resolution monochrome pictures, stored them in battery-powered memory on-board and the user downloaded the pictures via the serial port into his or her computer. At least one Acorn third-party company adapted the camera to the Acorn platform and now we have the much more attractive next generation Fotoman, called the Pixtura.

This is a neat looking horizontal mode camera, not unlike a Canon still video camera in looks, and it takes either high or low resolution 24-bit colour pictures. Logitech is making the camera available as a development system to interested companies, which would seem to us as being right up Acorn's street.

Logi UK Ltd
Tel: (01344) 894300
Fax: (01344) 894303



The Logitech Fotoman Pixura – soon to be on the Acorn?

PipeEd

Following in the footsteps of *ClassCardz* for their Wordz word Processor, Colton software has come up with *PipeEd* for *Pipedream* users in the classroom. *PipeEd* is a set of teaching resources for teaching newcomers to *PipeDream*, which is still a popular package long after the advent of the more up-to-date *Wordz*, *Resultz* and *Fireworkz* family from Colton. *PipeEd* is priced £25 for a set of both student and teacher resources.

Contact Pat James
Tel: (01234) 857017

Online Media and Digital to cooperate

ARM Ltd's deal with Digital Semiconductor last month is followed closely by the announcement that Acorn's interactive multimedia business is to cooperate on the development of its technology with Digital Equipment Corporation.

The agreement will see Digital working and exchanging interactive television technology with Online Media. Digital's focus will be on the media server technology, linking up to Online Media's set top boxes. It's heartening to see Online Media mixing it with some big names, like Digital, clearly following the successful example set by ARM Ltd over the last four years. ICL has also joined the Cambridge interacive TV trial, which uses Online Media STBs.

Thumbs up for ARM

ARM Ltd has devised a 16-bit implementation of its RISC architecture, called Thumb (think about it!). The idea is that 32-bit RISC code takes up a lot of space because all instructions are 32-bits wide. In some cost-sensitive applications, memory becomes a major cost overhead and although ARM code is more compact than practically all other RISC platforms, by making it 16-bit, there is a big memory requirement saving, even though 16-bit code programs are slightly longer.

16-bit hardware implementation is also cheaper than 32-bit. Thumb versions of ARM processors will help ARM compete with cheaper 16-bit or 8-bit technology where performance isn't a high priority, like in cellular phones; for example. Memory requirement savings of between 30 and 40 per cent should be possible. However, 80 per cent performance is preserved compared with some 32-bit ARM processor implementations.

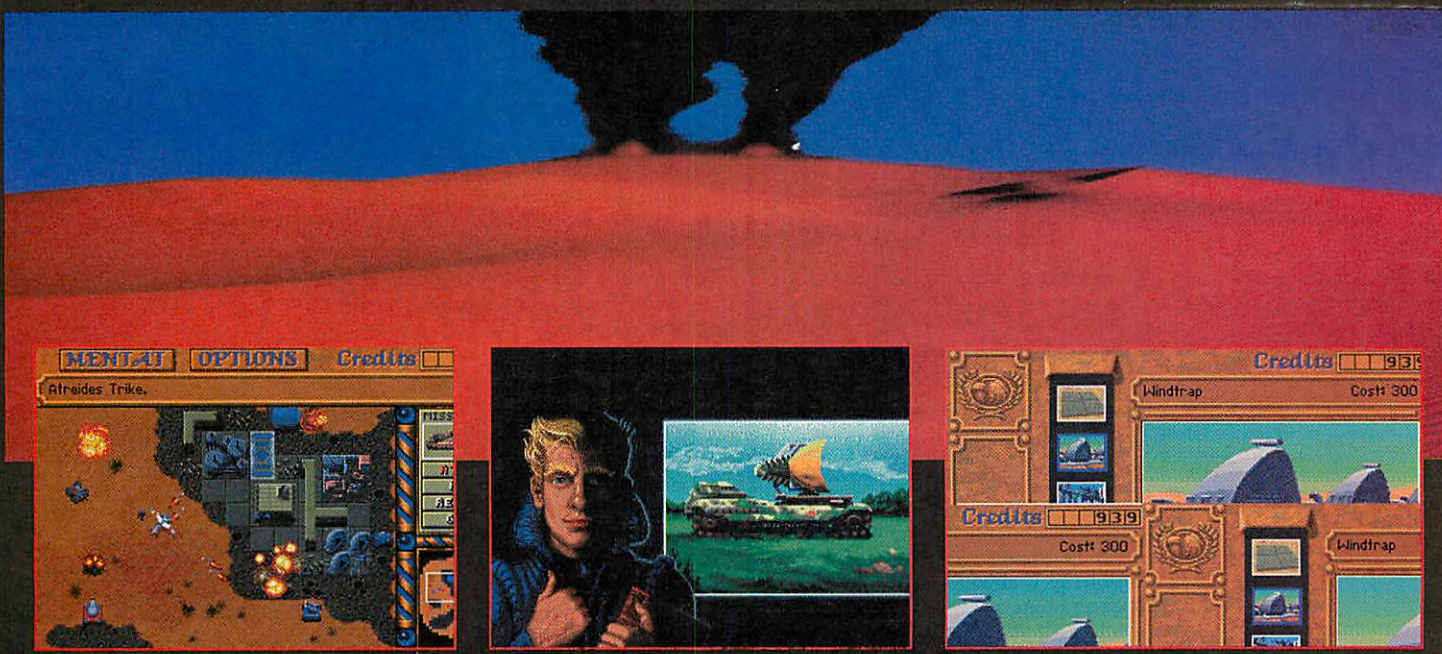
Another EMMA for Yorkshire TV/ILP

YORKSHIRE Television and ILP (Interactive Learning Productions) have won an International EMMA award for multimedia products in the education section for the second year running. The award was won for the *World War II* CD-ROM.

Yorkshire Tyne Tees Enterprises
Tel: 0113-243 8283
Fax: 0113-234 3125

DUNE II™

One of the biggest games ever now available on the Acorn



BATTLE FOR ARRAKIS

Speech - Artificial intelligence - 9 mb compressed graphics - 30 massive battle zones - Based on the cult book by Frank Herbert - over 20mb of source material squeezed onto 7 floppies

"Dune 2 is a strategy game extraordinaire...should be an essential purchase." Archive Magazine. "...the best game (for combat) that I have ever played...easy to play, great fun to play and as challenging as hell...overall 90%." Archimedes World

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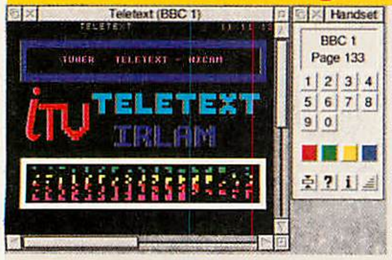
Westwood STUDIOS

Virgin

Runs from floppy or hard drive on RISC OS 2/3 with 2mb RAM.
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Tel: (01234) 531194 Fax: (01243) 531196

Colour Scanner & Multimedia Update

Teletext, NICAM Digital Stereo & TV Tuner



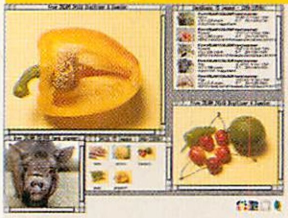
iTV is a complete television reception system with TV tuner, Teletext and NICAM stereo audio decoder on a single expansion card.

iTV is simple to use with Channel and teletext page selection all carried out from a single RISC OS application.

As well as generating stereo audio & video, **iTV** can also switch in an external source so that you don't have to mess about swapping leads. A composite video output is provided to drive digitisers - with integral support for the **24i16** multimedia system.

- Teletext & NICAM support **as standard** including all software.
- Crystal controlled full-band tuner receives VHF/UHF from aerials, cable or VCRs etc.

ImageBank - £31.14 inclusive VAT P&P

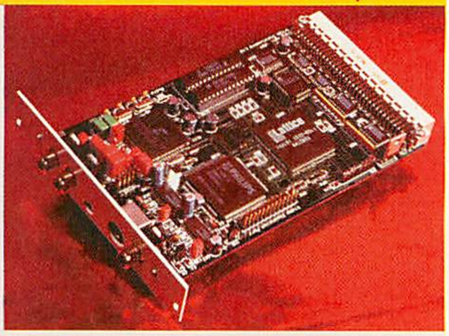


With a copy of **ImageBank** you can squeeze ten megabytes of 24 bit scans onto a single floppy disc, and catalogue them too!

ImageBank compresses pictures automatically, creating 'thumbnail' versions so that you can browse through them quickly and easily.

Double clicking on the thumbnail rapidly decompresses the image to its full size. Acclaimed in reviews as an invaluable utility.

24 Bit Video Digitiser & 16 Bit Audio Sampler



24i16 combines an advanced video digitiser with a 16 bit sound sampler. As well as brilliant still images **24i16** captures superb Replay movies and hi-fi audio.

A standard **24i16** can grab a complete TV field at a resolution of 768 pixels by 288 lines from any S-Video or composite source.

With the 1Mbyte VRAM option, full frames (768 by 576) can be obtained from still video sources. Replay movies (including sound) can also be captured at up to 25 images per second. Image size and rate are adjustable and limited only by disc and system bandwidth. A sophisticated application is provided which is both flexible and easy to use. Features include:

- Hardware scaling & anti-aliasing.
- Contrast, hue, brightness and saturation control in real-time.
- Real-time video expansion port for future connection to other hardware.
- Built-in ADPCM audio compression.
- Mixing and high quality filtering of built-in Acorn sound system.
- SWIs and example programs available to allow easy use from your own programs.
- Optional waveform monitor and vectorscope utilities.



24 Bit COLOUR Hand Scanner



The first Colour hand scanner for RISC OS machines. Supplied complete with a specially designed expansion card and application software for A400, A5000 and Risc PC. From monochrome or 256 grey scales up to full 24 bit scans this scanner does them all brilliantly. But don't just take our word for it:

"Irlam has led the way in bringing high quality colour scanners to the Arc..The first affordable 24-bit colour scanner...Irlam has obviously put a lot of effort into getting the best possible images from the scanner, and the images that Prol-Mage generates are excellent..an excellent product at a very reasonable price" - RISC User

"I was most impressed by the quality achieved by this handy unit...The entire package works very well and produces stunning results" - Archimedes World

Unlike many hand scanners this package is easy to use, scans straight and produces brilliant results. Features include:

- 24 bit scan head providing 16.7 million colour & 256 grey levels.
- Real-time high-quality preview whilst scanning direct-to-disc.
- Resolution up to 400 dots per inch.
- Powerful colour map controls allowing RGB components to be adjusted individually and effects previewed in real-time.
- 32 bit sprite format & takes advantage of new Risc PC modes.
- 24 bit Clear & industry standard compressed TIFF and JPEG files.
- Brightness, Gamma correction and Sharpness controls.
- Visual and audible warning if scanning speed is too fast.
- Images can be rotated and cropped after scanning.

Epson Colour Flat-Bed Scanners



Epson scanners are fast, reliable and produce consistently high quality scans plus they have the added advantage of supporting transparency adaptors. They can all be driven directly from the printer port of A3010, A4000, A4, A5000 and Risc PC so no expansion card is necessary (although there is one for A400's etc).

They can also work via Acorn, Cumana, Morley or Oak SCSI cards.

GT6500 This model scans at 300dpi (optical res) and interpolates up to 1200dpi in colour. SCSI interface is optional.
GT8000. 400dpi (optical) resolution and interpolates to 1600dpi. This has built-in parallel and SCSI ports. Faster than GT6500.
GT9000. This is the latest model. It scans at 600dpi (optical) and interpolates up to **2400dpi!** Scans are digitised internally to 30 bits which ensures that detail is faithfully reproduced even in dark areas. Has built-in parallel and SCSI ports.
Transparency Adaptor. This optional unit fits any Epson scanner and allows slides and black and white negatives to be scanned up to 5" x 5".

ProlMage

Prol-Mage scanning software has been developed over several years. It is proven, easy to use, produces high quality images and supports a wide range of image formats including industry standard TIFF and compressed JPEG files. We can supply complete packages (see below) or just software.
Prol-Mage includes:

- Multi-tasking scanning with images building up on-screen.
- Fast previews and scanning direct-to-disc for large images.
- Superb 256 colour sprites plus 16 & 32 bit for Risc PC.

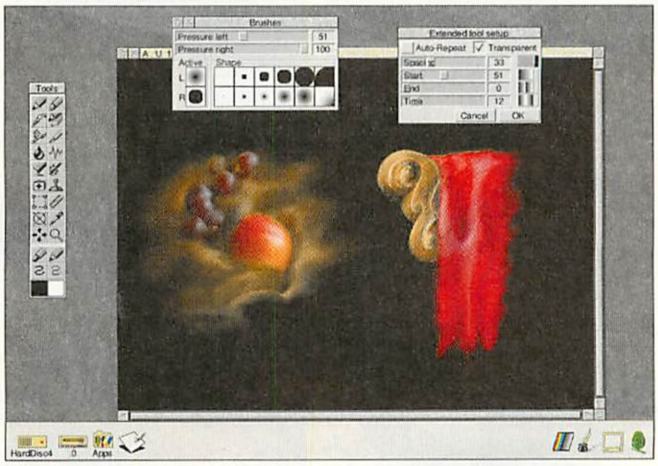
For the Complete Picture contact:

Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middlesex, UB8 3PH. Tel/Fax 01895 811401

All hardware products come with 1 year full guarantee. E&OE.

Access VISA

CGS bids farewell to the Acorn platform



Digital Arts' distributor goes – a taste of things to come?

CGS, the official distributor of Digital Arts' photo-retouching package *Picture*, has announced that it is no longer staying with the Acorn market. The main reason is its concentration on the more lucrative products for other platforms. If you wish to buy or upgrade *DA's Picture* then I can't foresee any problems as CGS will still be dealing with the distribution of the forthcoming revised version – with a fully RISC OS-compliant front-end. We will keep you posted as to who will be distributing DA's products in the future, so worry not.

This move is indicative of a general trend in the Acorn market nowadays towards PC compatibility and even production of PC-dedicated products. This is financially understandable, but with immortal industry-standard products extant in the PC world, companies will have to conjure up something pretty special to make any impact.

Something pretty special – something like the *Sibelius* music programs, perhaps? Something like video processing systems from Eidos? This is the direction that Acorn third parties should be pointing themselves in; high-end niche products at irresistibly low prices, with lower-end spin offs too. The Acorn platform – and especially the Risc PC – is an ideal stable for the development of such products.

With increased dedication to targeted marketing and pricing by Acorn itself, the mammoth potential of the Acorn platform willproduce more industry-standard challengers and entice PC buyers to a superbly efficient cross-compatible platform.

The whole platform must produce what the world arena wants and hasn't yet got. If these moves are not made soon we will see many more graphics specialists and many more users missing out on a great opportunity by bailing out of the Acorn platform altogether.

CGS ComputerBild
Tel: 0181-679 7307
Fax: 0181-764 7898

Can you a ford to miss out?



DESPITE being the subject of a column with possibly the most unacceptable, nay, offensive headline ever to be printed in *Acorn User*, this souped-up Mark II Ford Escort, the art work of Kevin Colgan of Northern Ireland, is this month's worthy winning picture.

£20 will be flying its way to the green isle, perhaps to contribute to Kevin's car fanaticism or to something for the Risc PC, on which he worked for three days to perfect this piece. It should be noted that this was Kevin's first attempt at using *ArtWorks*.

The stratospheric sum of £20 could also be yours, but don't forget to send in your name and address, how you did your doodle and last but not least, your piccy.

Video scam

There is much speculation at the moment about the incorporation of high spec VIDC20 boards coupled to 3 or 4Mb VRAM for future incarnations of the Risc PC. Some third-party companies have experimented with 3 and 4Mb VRAM and highly clocked VIDC20s but problems arose as the data transfer bandwidth could not accommodate high enough screen refresh in true colour modes larger than 1024x768. Even if there was a way of uprating the bandwidth of the video subsystem, which could perhaps be done using memory interleaving to give 3Mb screen modes, Acorn has soldered the chip onto the motherboard which would make upgrading a messy business indeed.

PC Card but no XGA

Yes it has finally arrived, if only in the co-processor slots of a very select few. The PC co-processor could well be the first step the Acorn platform has been waiting for to reaffirm its position as a contender in the world of desktop computer graphics.

Full PC compatibility at a competitive price will be an attractive proposition to loaded PC buyers who are looking for top graphics performance from which ever angle they can get it, and seeing that the Acorn Risc PC will basically act as a £1000 graphics board, the screen performance is bound to turn more than just a few heads.

But as yet there are no more screen drivers for higher resolutions and colours than you would expect from an A5000. I hope that by the time Aleph One launches its 66 and 100MHz versions of the co-processor card, the drivers will be written and optimised, otherwise Acorn may fail to attract big numbers of graphics users from new markets.

Contacting me

You can contact the Graphics page by writing to me, Jack Kreindler, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: jack@acornusr.demon.co.uk.

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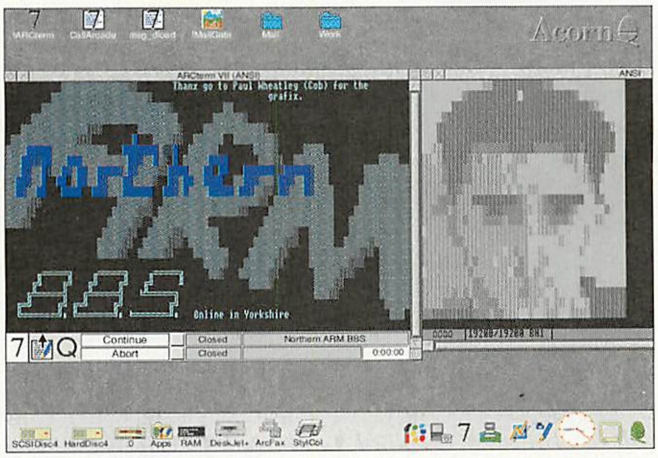
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Comms

Northern ARM BBS online in Yorkshire

THE West Yorkshire City of Bradford is the location of Sysop Chris Jackson's Northern ARM BBS. The system runs on a Risc PC600 connected to a US Robotics Sportster V32bis modem. The software used is *ARMbbs*, the newest BBS package for Acorn 32-bit computers written by Keith Hall, and Northern ARM BBS is helping to beta-test the software.



Northern ARM BBS and its Sysop.

Chris has many strings to his bow, including authoring comms-oriented PD and Shareware software that can be found on many BBSs, and writing software reviews for magazines. He is also the host of the Club Corner in this very publication.

One unusual feature of Northern ARM BBS is that users have the ability to download files from the two Datafile PD CD-ROMs, using a special BBS 'door' written by Chris. Door programs allow BBS operators to add features to their systems that are not included as standard in the BBS software alone. The release version of the CD-ROM door will also be usable with *ARCbbs* systems, Chris tells me.

The Quantum PD/Freeware programming group, known for such delights as the *Liquid Dreams* demo and the *Queue The Music* tracker player, have a special area on the BBS offering software, product news and contact points for the group members.

Northern ARM BBS has a good selection of general Acorn PD and Freeware files for download, and Chris is anxious to increase his hard disc storage capacity to contain the rapidly expanding filebase, and get a FidoNet connection just as soon as *ARMbbs* can support it, which will liven up the message areas and get the BBS known to other Acorn users round the country.

Northern ARM BBS is online 24-hours a day at all speeds to V32bis (14400bps).

Northern ARM BBS
Modem to: (01274) 530831

An impressive WWW page editor

IT'S FUNNY how sometimes things just fall into place. I've just been reading an article on the comp.sys.acorn Usenet newsgroup, where the writer is complaining that he has no easy way to edit and compose World Wide Web pages on Acorn machines. Well now there is, and the shareware software to do it is already on the CD-ROM on the front cover of this issue!

All you need is a copy of Computer Concepts' *Impression Style*, *Publisher* or *Publisher Plus*, and Ben Summers' *HTMLtools* from the CD-ROM, downloaded from a BBS, ftp'd, or obtained directly by sending a blank formatted disc and return postage to Ben himself.

HTML is the HyperText Markup Language used to create World Wide Web pages, and is based on giving parts of the source text attributes when the actual appearance is determined by the viewing program.

Ben's HTML tools allow you to edit HTML using *Impression*. You can create WWW pages, mark-up existing *Impression* documents for display on the WWW, load existing HTML documents into *Impression* for use elsewhere or re-edit HTML pages.

To produce reasonably consistent HTML from the page reader's point of view with these tools, the *Impression* documents need to use a set of predefined styles.

The example *Impression* document included with the tools describing their use is actually a marked up document that uses the predefined HTML styles, and can be exported by the tools as an HTML file. It shows examples of all the types of styles, such as heading, character-based, command and so on.

Ben admits that these tools are not the complete solution, but until a dedicated HTML editor is available the tools make the job much easier than before. As with all Shareware, you need to register with the author, which qualifies you for updates, technical support and a clear conscience. You decide the registration fee, which you send to Ben Summers (ben@cconcepts.co.uk) at 1 St Clements Hill, Norwich, NR3 4DE.

Don't forget the one

It's finally come round to PhONEday – 16 April 1995. STD codes dialled on or after this date without an extra '1' after the initial '0' won't work, and you'll get a recorded message telling you to dial the new code. There are complete code changes for certain cities too. If you haven't altered your phone's dialling memories yet, do it now.

First come, first served

A new service provider called *First! For Internet* comes online this month, with some very attractive offers for new users, including a free V.34 modem, no initial charge for Acorn owners and a twenty-four hour support line. *First! For Internet* has engineered a country-wide network in a unique deal with British Gas by sharing routes with its SuperHighway network, allowing POPs all over the country. From what I've heard, this new service should be really cooking by the time you read this. For more details call *First! For Internet* on a free specially-set-up support line.

First! For Internet
Tel: (01041) 995000

Acorn music echo

By popular demand, a new Fidonet Echo dedicated to the involvement of Acorn machines and music has been created. This joins the growing number of other Echomail message conferences that specialise in topics of interest to Acorn computer users. Links have already been established between Acorn interest BBSs in the UK, Germany, Australia and the Far East. If you'd like to participate, ask your sysop to join the ACORN-MUSIC echo.

Contacting me

You can contact the Comms page by writing to David Dade, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: DaviD@arcade.demon.co.uk, Netmail to DaviD Dade FidoNet#2:254/27.0 or mail #2 on Arcade BBS 081 654 2212.

PM Printing buys Acorn

AN INNOCUOUS factory unit conceals the hive of activity that is PM Printing, a successful little company that has grown up alongside its customers in Warrington. It's been printing, folding and binding everything from business cards up for over 12 years and – having finally outgrown its Varityper machines – decided to go for a brand spanking new DTP workstation.

It used a consultant to advise it since its employees are by their own admission 'non-technical types'. PM's managing director, Paul Appleton, explained that the demonstration at NorthPrint was the clincher. He'd been less than impressed by a previous Mac-based demo: 'the poor guy giving the demo didn't really know what he was doing'. Finally PM plumped for an Acorn-based Graphtex system from AB Dick.

However, all was not rosy – just about everything that could go wrong did. 'I was all for sending it back at that point' says Paul 'but it's been fine since Christmas and appears to be doing great things.'

The system had its memory beefed up and needed its hard disc replaced as well as all manner of other niggles. 'Simon Woodward and John Brayshaw were great; they came all the way up from Cambridge to fix it themselves,' enthuses Paul. Indeed, despite some serious teething problems, Paul says 'Acorn and AB Dick have both been incredibly supportive.'

The two designers at PM are Sally Warren and Angela Crowder. Sally grew up on digitech Varitypers and only really used computers 'to play games' before this. Angela has experienced the joys of both PCs and Macs and despite some initial reservations is warming to the new machine.

They each have some reservations about the system. Trying to print a page with more than a few dozen typefaces on it causes problems, and some of the software doesn't really do what they want it to do a lot of the time. They're also getting used to the frustration of losing an hour's work to a 'fatal internal error' – a feeling we can all sympathise with. That's not to say that the Mac or PC alternatives don't crash – the Mac's fatal crash errors aren't much more helpful – it's just that losing work on any system is unnerving.

The quality of the work they're producing is, however, quite stunning, a credit to Sally and Angela who produce all their own artwork. They are already pushing the boundaries of the software they use by trying to do a few things it was never designed for, like di-radial blends, embossing and tileable backgrounds. Chatting to them was useful since they point out functionality shortfalls in the Acorn software market and have already become experts at using *Publisher*, *ArtWorks* and *Photodesk*.

The bulk of PM's work is the staple diet of the printing industry, two-spot colour work. Two-spot colour was only recently introduced in *Publisher Plus*, but the capability has been present in *Artworks* for some time. It is looking at doing full process work itself rather than farming such work out, but Paul would like an internal job first as a trial run.

The emphasis at PM is very much on quality and it doesn't expect the new kit to bring in more work. 'We have a quicker turnaround and expanded capabilities,' says PM. Sally spends the most time in front of the huge 21in screen which she says is 'brilliant' and Angela is impressed with the 'drag and drop' method of working which she describes as 'more straightforward'.

The work they were doing while we were there was quite an astonishing corporate redesign, and the professionalism of the graphics is quite something to see on a machine widely regarded as a non-competitor in the 'real world'. The only major gripe voiced by all three is the help line support, or lack of it. 'It's not that they don't help you, it's just that you often spend hours trying to find the right person to ask.'

They are, however, keen to pick up some clip-art CDs and 'really get to grips' with the capabilities of the machine. Indeed, the layout room has an orderly row of ageing varitypers idly gathering dust, like a museum display with a quietly humming innocuous curved grey box now leading the pack; a sign of things to come, we hope.

PM Printing
Tel: (01925) 828019



Two-spot colour work forms the bulk of PM Printing's output.

Tools of the trade

Visitors to the BETT show may have sneaked a peek at the latest alpha version of *Ovation 2*. The configurable tool bar was shown off as another innovative feature to tempt potential buyers. A release date has yet to be set despite increasing interest from a sizeable cross-section of users.

Beebug
Tel: (01727) 840303

Updates to the Impression family

Style, *Publisher* and *Publisher Plus* have recently been updated to version x.05, fixing a few problems with the *Word Perfect* loaders – which caused tabs to be incorrect – and with search and replace. Composite colour PostScript output (output to a colour PostScript printer) now renders 24-bit sprites correctly. Another improvement is the addition of the filename printed at the top of printouts with registration marks, with a grey scale printed on separations. This is much appreciated in the *Acorn User* office for the pages of the magazine where we use *Impression*, as it helps us keep track of films as they come off the imagesetter.

Computer Concepts
Tel: (01442) 63933

To PC or not to PC?

I haven't tried it yet since I haven't got a PC Card, or a Risc PC for that matter, but I assume *PageMaker* and *Quark Xpress* both run happily alongside *Publisher* these days. Mind you, since *Xpress* isn't exactly renowned for running smoothly on native PCs, I'd be interested to hear from anyone that's tried it and also to hear your comments on the relative merits of each package.

Contacting me

You can contact the DTP page by writing to me, Steve Powell, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to stevep@acornusr .demon.co.uk.

Public Domain

Game design with GameSuite

AN interesting concept in the computer games world is the idea of a games designer. Several different packages have been available in the past to design anything from text adventures to full-blown arcade games, with the aim of allowing non-programmers to design their own games. Andy Southgate has gone part of the way with a new set of game design tools entitled *GameSuite*. The package is designed to allow novice BASIC programmers produce full-speed arcade games using a set of fast but easy-to-call routines from *GameSuite*.

The package is very comprehensive, covering all the main areas involved in game design within three main programs. *FastSpr* provides new sprite plotting SWIs that perform mask plotting – plotting with transparent backgrounds – at around four times the speed of the OS sprite calls. Sound effects are catered for in detail by the *Stasis* program, with the overall game mechanics handled by the *Amnesia* module.

At first sight the package looked fairly complex, which a novice programmer could well find quite daunting. However, after reading a few of the help files and manuals I realised most of the features included wouldn't actually be needed for a simple game. *GameSuite* isn't a quick fix game designer for the complete novice, but if you can write BASIC with a reasonable level of competence and don't fancy trying machine code, it could well be for you.

Game designers are no substitute for your own code routines, but as a tool for the novice programmer they are a great way of getting started in the games world. From my own perspective, now that I can write ARM code I'd never go back to something like *GameSuite*. Had it been around three years ago, when BASIC was as far as my coding skills went, I'm sure I would have been using it.

I wish I had the room to delve into *GameSuite* in more detail, as it is a very comprehensive package. If you're interested I would advise you to check out the complete freeware program which is on disc UT192 from The Datafile or on the cover CD-ROM.

All in a Flux

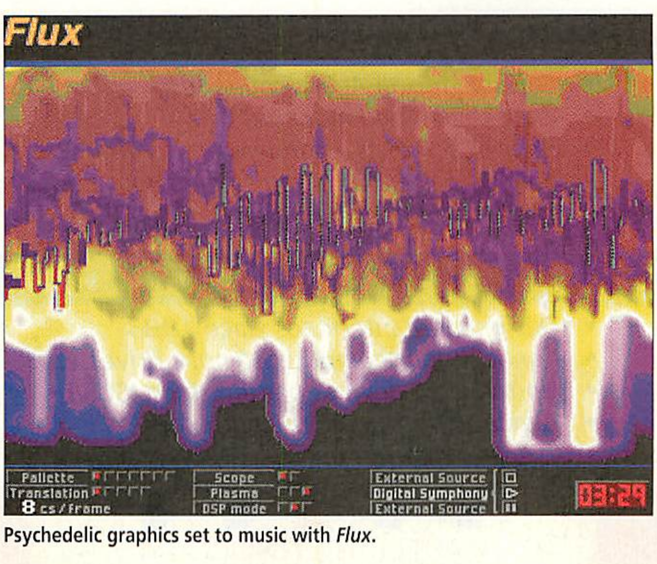
THE demo scene has been fairly quiet over recent months, apart from a rather unusual production called *Flux* by coder Peter Knight. Although not a full-blown demo, *Flux* is more of a souped up oscilloscope viewer which displays a jazzed up waveform in real time on the screen.

Peter has mixed the display of musical data with a cellular automata routine to give the graphics a fantastic plasma-like appearance. The waveforms are plotted to the screen in one of a range of palettes from *Cthuga* on the PC. These can be cycled with the press of a key to locate some of the more aesthetically pleasing shades. Other controls affect the scrolling of the display and the mirroring techniques used, although I found the Double interpolation with smudge (press X and W) to be the most attractive.

After a few tries I took the author's advice and replaced the music provided with a module of my own (and *Acorn User*'s *QTM* player). The *Flux* music is a little on the boring side, and anything this psychedelic requires some hard core techno music, which when used really gets the old waveform moving.

Flux is a great little program, mixing different types of graphics with the sound output from a soundtracker module, and it performed well on my ARM3 machine. ARM2 performance was a little sluggish, but still well worth a look.

Flux is available from the Arcade BBS as *Flux121*, and should be on next month's cover disc.



Psychedelic graphics set to music with *Flux*.

Vivaldi

A new version of Andrew Wood's tracker editing software, *Vivaldi*, is now available in the form of a PD demo version and a fully usable registered version for £10. Watch this space for further information.

Net reference

I've recently had several comments about the lack of online references to PD on the net. I'm currently considering including these along with the usual PD library disc codes. I've always tried to avoid putting too many references in as it quickly eats up the limited space I have available each month, but if there is enough demand I'll put them in.

Having featured most of the PD libraries in news in brief last year, I'm also thinking of covering some of the PD sites on the internet. Any comments or suggestions would be much appreciated, and can be directed to the the e-mail address below.

Big bang

I've just seen a demo version of a brand new arcade game from Psycore, the authors of *Top Banana* and a whole array of techno demos. I have to say it looks pretty impressive. *Big Bang* is a sideways scrolling platform affair, packed with loads of really strange fx and music – in true Psycore style. I'm unable to tell if this version is PD, but will quote a PD library next month if it checks out okay. Meanwhile there is a distributable version on the cover CD-ROM.

Psycore
Address: PO Box 3837,
London NW3 1JF

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. By e-mail to quantum@digibank.demon.co.uk or online on the Arcade BBS.

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Business

Sound and Replay in CableNews too

NEXT month we'll be taking an in-depth look at what is arguably the most powerful desktop presentation package in the world – *CableNews II*.

Those of you who remember the original *CableNews* would be forgiven for thinking this was some kind of joke: but you'd be wrong. Evidently Lindis, along with plenty of encouragement from Acorn, decided to give *CableNews* a major refit – as those of you who visited the Acorn World Show will know – so much so that it can do almost anything with its unique hot-spots feature.



A great-looking updated *CableNews* from Lindis (albeit showing an out-of-date offer).

Hot-spots allow your presentations to be interactive. This means that if you press a specific key or click with the mouse over an icon, it will move to a different slide. Furthermore, they can run a file or command. So, for example, your presentations can now be accompanied by *Digital Symphony*, *AudioWorks* or even *SoundTracker* files.

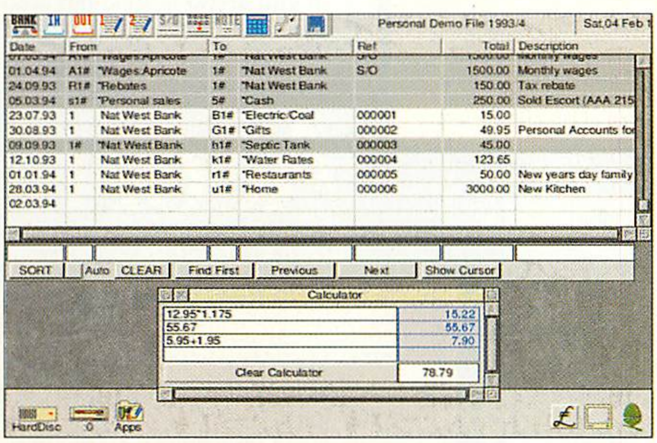
Of course, if you get bored you could always watch an Acorn Replay file. Then there is always OLE to make editing easier.

Lindis International
Tel: (01986) 785476

Prophet margins and beyond PA

BACK in the January issue I covered the tie-in that *Prophet* is to have with *Payroll Manager*. Since then an in-depth specification has been unveiled on the impending *Prophet 2*. The program is being completely re-written, so not only will it be faster both in operation and loading but will also require less memory.

Prophet 2's interface is to be appreciably improved with button bars absolutely everywhere (or so I'm told). This will therefore make the menu window obsolete. Furthermore, it will be possible to drag and drop text between *Prophet* and other programs without the *Transfer* utility. The invoicing and reporting facilities are being touched up – on the presentation side they already knock the socks off *Enterprise*. Even now, full-colour invoices with backdrops *and* your company logo are a characteristic. Regrettably, on account of the large number of enhancements, the program will be incompatible with RISC OS 2.



Personal Accounts is an absolute dream to use, beats everything for the PC and is soon to have a 'professional' version for cash-based businesses.

Unlikely to be ready for the Spring show is Apricote's other forthcoming package which is for cash-based businesses. It is described as being the acclaimed *Personal Accounts* plus all the bits relevant for VAT, i.e. two extra columns in the entries window and a VAT report window, hence its code name *Personal Accounts Plus* – though this may change by the time it's released.

If it's anything like as easy as *PA* then ACP's deplorable *EasyMoney* will have serious trouble competing.

Apricote Studios
Tel/Fax: (01354) 680432

Network accounting

Only months after Sage released its network version of *Sage Sterling* for Microsoft Windows, Sensorium has come up with its own for the Acorn platform.

It is a modular package, meaning it can be bought with or without the networking facility and, if any appear, new modules can be added. I am not terribly excited by the non-network version as that market is more or less covered with *Enterprise* and *Prophet*. Besides which, from an aesthetic viewpoint the program is about six per cent style-guide compliant.

The single computer version is £75 + VAT, while the network version is £99 + VAT.

Sensorium Ltd
Tel: (01274) 820722

Risc PC only?

It was questionable a year ago how much software would continue to be produced for older pre-Risc PC machines. I'm glad to say that from a business point of view, there is not a single piece of software which requires the Risc PC.

Strangely, the spreadsheet *Eureka 3* is advertised as a Risc PC-only product. In fact, it will work on any Acorn with RISC OS 3.1 or later and 2Mb of RAM. If you're still using an earlier version of RISC OS, version 2 is in the box as well – but, obviously, doesn't include the new features.

Longman Logotron
Tel: (01223) 425558

Arc case studies

Remember I mentioned I will be doing some case studies in the future? Well, I was somewhat thunderstruck by the number of companies who phoned me and gave me a list of customers who would be 'ideal' in a case study. Next month I'll be starting off with a motor engineering firm in Middlesex.

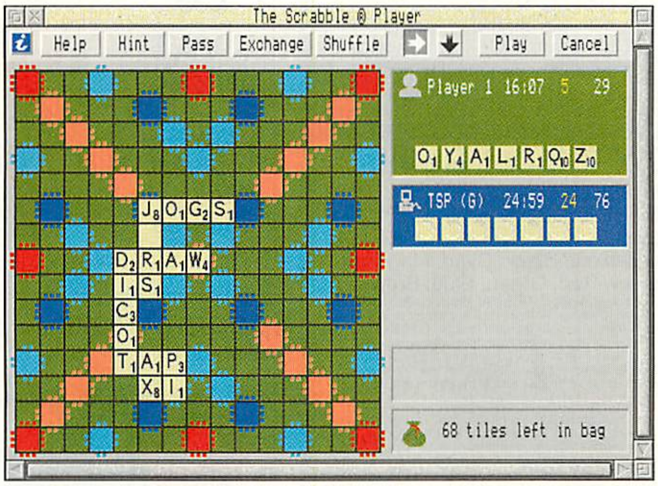
Contacting me

You can contact the Business page by writing to me, Alex Singleton, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: alex@acornusr.demon.co.uk.

Education

Sorry, no Scrabble

AFTER what seems like an age, you can finally play Scrabble on your Acorn computer. US Gold (in association with Spears) has produced an excellent implementation of the classic game and is marketing it for the astonishingly low price of £22. Here, I thought, is a game I would put on the network, even if only for limited periods. Being the honest chap I am, I contacted US Gold to enquire about the cost of a site/network licence. The reply from the marketing division was that US Gold has no licensing policy, and I would have to buy what would effectively be a class set of floppy discs.



Scrabble from US Gold: excellent educational potential, but no network licence.

In fairness, US Gold would offer them at a reduced price as, I gather, they have already done for a couple of schools. But this solution is no solution if many of the networked computers lack disc drives. The program will only work from the key disc, which – as I've pointed out in previous articles – is fraught with problems, especially in a school.

We have only got ourselves to blame that software houses have to go to these lengths to prevent their valuable work from being illegally copied. Personally, I support software protection unless it hinders me, the legitimate user. There are ways to protect software without resorting to key discs.

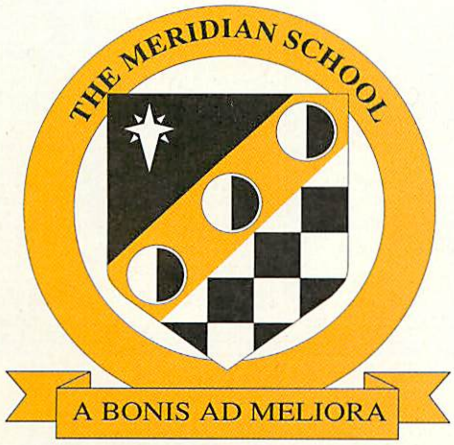
Hardware protection

THERE have been several recent instances of people stealing computer hardware from schools. Most security systems which involve physically fixing the item to a bench hinder the operation of the machine. I once saw a video lock which, when in place, ensured nobody could steal it. Unfortunately, part of the hardware covered some of the video controls so you couldn't use it either.

Kodit has come up with a system that at least means the equipment is non-saleable. A label about the size of a credit card (or smaller if required) is attached to the equipment with ultra-violet resin. Even if an attempt is made to remove the label, a mark will remain. Information on the card is also put onto a database so that if stolen and found, it can quickly be traced.

Of course this system is not restricted to computer equipment but any small high value item such as video recorders, cam-corders, fax machines and digital scales. The cost is £50 for a kit for 20 items which includes lifetime registration, entry onto the database, the tags, resin and so on. This price is negotiable for both quantity and for education purposes.

Kodit Database Ltd
Tel:(01625) 529283
Fax (01625) 539833



Smart logos converted into Draw files

SCHOOLS wishing to have their logos turned into *Draw* files like this one, but who have neither the time nor inclination to do it themselves, should take a look at what Smart DTP has to offer. Send in a letterhead with the logo and £9.50 and the *Draw* file will be returned within 21 days. The drawing can then be used for letterheads, news letters and bulletins.

Smart DTP
Tel: (01332) 842803

Acorn Advantage

For schools unable to afford all the Information Technology equipment they require or desire, Acorn has come up with a scheme that could help. It's simple – buy Acorn equipment and earn Advantage points. When you've got enough points you can 'buy' other equipment, including computers.

But it doesn't stop there; teachers can now apply for an Acorn Visa Card which will earn Advantage points for their school when used for any personal purchases. The added bonus is there is no annual fee and interest rates are significantly less than Barclaycard. But let's be honest, why do you really want an Acorn Visa Card? Because it's got an Acorn on it and we like to fly the flag!

Acorn Computers Ltd
Tel: (01223) 254254

Filer jargon

Jargon is a useful 'shorthand' for experts but it can be confusing and intimidating for non-experts, and therefore is inappropriate. There are two error messages that constantly pop-up which should be re-written as they baffle students almost daily. The first error, generated by the application, usually occurs when you save a document for the first time. Judging by the variations, software writers have been grappling with this one for some time.

Press F3 and a save box appears. Reasonably, students click on OK and a message along the lines of 'Drag icon into filer widow' appears. Isn't there a better term than 'filer window'? The second is generated by RISC OS itself and occurs when a document isn't recognised because the application which produced it hasn't been loaded. This is a classic: 'No run action specified for this filetype'. Can't we have a helpful message like: 'Please load the application used to create this document?'

Contacting me

You can contact the Education page by writing to me, Geoff Preston at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to GPreston@arcade.demon.co.uk.

Showroom open Mon-Sat 10-18.00 hrs **(All prices exclude VAT)** Carriage included except where indicated

CD-ROM



All the following CD-ROM drives are PhotoCD compatible and include a driver for CDFS =>2.20

Internal Drives

XM-3601B (Tray) 4.4xSpeed, 140ms	**£259**
XM-3501B (Caddy) 4xSpeed, 135ms	£299
Suitable for RiscPC. SCSI interface not included.	
Cumana CD300i IDE 300kb/s, 300ms	£199
Cumana CD300ia IDE	£249

External SCSI CD-ROM Drives

Panasonic (Tray) 2xSpeed, 300ms	**£229**
XM-3601B (Tray) 4.4xSpeed, 140ms	**£339**
XM-3501B (Caddy) 4xSpeed, 135ms	£379
SCSI interface not included. Add extra £25 for A3000.	

SCSI cards

Morley uncached SCSI card	£130
Morley cached SCSI card	£169
Cumana SCSI II card	£169

The above cards are suitable for A300, A400, A3000 (Ext), A540, A5000 and RiscPC. For others see MultiPodules. Add £25+VAT to Cumana SCSI II card for external cable.

Hard Discs

New Lower Prices

IDE Bare Drives		SCSI Bare Drives	
170Mb 14ms	£100	270Mb 12ms	£139
270Mb 14ms	£135	540Mb 12ms	£199
420Mb 14ms	£169	730Mb 12ms	£249
540Mb 12ms	£189	1Gb 12ms	£349

Above are 3½" bare drives only. Please add the relavent accessories from below. Drives are Connor or Quantum. ForA3000/A3010 hard discs see Hard Card section below.

Syquest Removable Hard Drives

IDE Bare Drives		SCSI Bare Drives	
105Mb Syquest	£159	105Mb Syquest	£189
270Mb Syquest	£289	270Mb Syquest	£289
SCSI External Drives (Incl. Cartridge)			
105Mb Syquest	£289	270Mb Syquest	£479
Syquest Cartridges			
105Mb Cartridge	£45	270Mb Cartridge	£55

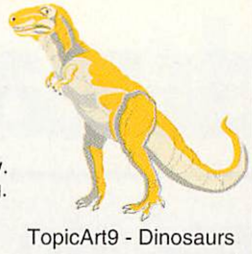
Hard Disc Interfaces/Accessories

50-50C SCSI Cable	£12	25-50 SCSI Cable	£15
SCSI II-50 Cable	£25	SCSI Terminator	£10
5¼-3½ open adapt	£10	5¼-3½ HD adaptor	£15
IDE Accessories		**SCSI Interfaces**	
IDE interface	£79	Morley UnCached	£130
2nd Hard Drive Kit	£15	Morley Cached	£169
External case/PSU	£79	Cumana SCSI II	£169

TopicArt

Single disc clipart containing approx. 50 high quality draw format clip art images, each on a single subject. Comes with mono reference sheet. 12 subjects are available now. Please specify when ordering. Site licences are £16+VAT per disc, please ring for further details.

Subjects avail.
1 - General
2 - Transport
3 - Costumes
4 - Entertainment
5 - Bugs 2 Slugs
6 - Road Signs
7 - Sports Equip
8 - Sports Figures
9 - Dinosaurs
10 - Symbols
11 - Tools
12 - AnimalsGB



TopicArt9 - Dinosaurs

£8 + VAT per disc

TopicArt catalogue now available. £1.50 Inc VAT & p+p (cheques only)

Buy 4 TopicArt discs get one free
not incl SpecialArt



TopicArt12 - AnimalsGB



TopicArt4 Entertainment

QuickTile v1.02 £25+VAT



Up until now it has only been possible to print posters from Draw & Sprite files. Now with QuickTile you can create posters from ANY RISCOS application, including Impression. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks and tile references. RiscPC compatible.
Requires RISCOS 3.10 or later.
Return Disc with SAE for upgrade.
Upgrade from Tiler for £15+VAT.

DIY Ink Jet Refills

Single Refills (req an orig cartr.) £7
Twin Refills (Black only) £12
125ml / 400ml Cleaning Kit £4 / £10
Available in Black, Cyan, Magenta, Yellow, Red, Green, Blue, Brown

Please specify colour(s) required when ordering.These do-it-yourself refills can be used with any printer where the head and ink reservoir are combined, ie, DJ-500, BJ10/200. Please do not send empty cartridges. Please note that colour quality may not be 100% from a black cartridge refilled with another colour. We cannot guarantee against dried up empty cartridges and/or blocked nozzles.

QuickSound £10

Load, play, convert & resave Armadeus, Tracker and raw data sound samples. Apply special effects including Reverse, Echo, Max Vol, alter replay rate and resample frequency. Convert samples into modules for use with the RISCOS sound system. Create stand alone Utility mod's.

QuickShow £10

Slide show presentation and video titling package. Create sequences of frames containing text of any colour with drop shadows, outline shadows and rubout boxes using the RISCOS fonts. Sprites can also be included in frames, positioned and resized as necessary. Screens can be linked together with the sequencer with fades in and out.

SpecialArt (Xmas or Signs) £20+VAT (each)

Special editions of TopicArt consisting of a minimum of 4 discs full of clipart





Mail Order - 0161-474 0778 **(All prices exclude VAT)** Carriage included except where indicated

RISC PC / Acorn

All RiscPC's include 1yr on-site maintenance. **Low finance available. The following prices do not apply to finance, ring for details.** We operate Acorn Assist for teachers & academics. **All RiscPC systems are now in stock.**

2MHD210 + AKF60	**£1199**
2MHD210 + AKF85	**£1575**
5MHD210 + AKF60	**£1299**
5MHD210 + AKF85	**£1675**
9MHD420 + AKF60	**£1599**
9MHD420 + AKF85	**£1975**

Add following for CD-ROM

Cumana CD300i (IDE)	£199
Toshiba x2.2 speed (SCSI)	£330
Toshiba x4 speed (SCSI)	£390

Above SCSI CD-ROM are caddy loading & the prices include uncached SCSI card. The above prices only apply when purchased with a RiscPC system.

RiscPC Upgrades

4Mb SIMM RAM	£140
8Mb SIMM RAM	£230
16Mb SIMM RAM	£375
32Mb SIMM RAM	£680
1Mb VRAM (Acorn)	£129
2Mb VRAM (other)	£169
1 to 2Mb VRAM Upgrade (exchange)	£109
486 PC Upgrade (available ~Apr 95)	£99
MS-DOS 6.2 & Windows 3.11	£99
2nd Slice Case Upgrade	£99
Acorn Access for RiscPC	£119
Ethernet Interface Card	£99

A Series Computers

A3010 Action Pack 1Mb RAM	£254
A3010 Learning Curve 2Mb RAM	£339
A3010 Early Years 2Mb RAM	£339
Add £170 to A3010's for AKF52 Monitor.	
Free Action Pack with A3010 LC/Early yrs.	
A3020 2MFD/AKF52 MultiScan System	£699
A3020 2MHD60/AKF52 MultiScan Sys	£849
A4000 2MHD105/AKF52 MultiScan Sys	£879
Add £55 for AKF50 Monitor (not A3010)	

Software Packs

Learning Curve Advance & PCSoft	**£42**
Early Years Talking StartWrite, Paint Pot Flossy the Frog, Mouse in Holland, etc.	**£42**
Home Office EasiWriter2, DataPower, Pipedream4, PCSoft	**£85**

Above are ONLY available with a system.

Monitors

Acorn AKF52 14" 0.39dp MultiScan	£250
Acorn AKF50 14" 0.28dp MultiScan	£300
Acorn AKF60 14" 0.28dp MultiScan	£320
Acorn AKF85 17" 0.28dp MultiScan	£649
Certain computers will require an adaptor	£12

Portable Computers

Pocket Book II (256k)	£227
Pocket Book II (512k)	£275
Psion 3a (512k)	£249
A-Link (requires RiscOS 3.1)	£42
PC Link (for IBM PC compatibles)	£60
Parallel Link for Pocket B'k or Psion 3/3a	£26
P Book/Psion 3/3a Mains Adaptor	£15
128k RAM SSD	£43
256k Flash SSD	£47
512k Flash SSD	£77
A4 Portable 4MHD60 with PC Emulator	£1599

Hardware Upgrades

486sx25MHz Bare PC Card	£357
486SLC50MHz Bare PC Card	£434
486sx25MHz PC Card 4Mb RAM	£489
486SLC50MHz PC Card 4Mb RAM	£565
ARM3 (25MHz, Inc FPA socket)	£129
Colour Card Gold (CC)	£199
Eagle M2 Multimedia Card (CC)	£319
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Midi Max Card (CC)	£68
Movie Magic (CC)	£249
Powerpad (dual) (Gamesware)	£33
Scart - 15pin Monitor/RGBTV cable	£12
Serial Upgrade for A3000 (Acorn)	£19
Stereo Speakers 25W (mains powered)	£35
Sportster 14k4 Fax/Modem Bundle	£225
Sportster 28k8 Fax/Modem Bundle	£299
- The above modem bundles include a cable, - ArcTerm7 and ArcFAX.	
TV Tuner (CC)	£88
TV Tuner with TeleText (CC)	£157
User/Midi u/g (A3000/A4000) Ex-Demo	£30

Memory Upgrades

A3000 1-2Mb	£55	A3010 1-4Mb	£145
A3000 2-4Mb	£90	A3020/A4k 2-4Mb	£92
A3000 1-4Mb	£129	A5000 2-4Mb	£89
A3010 1-2Mb	£47	A5000 8Mb	£259
A3010 2-4Mb	£105	A3/400 8Mb	£249

Hard Cards/Multi-Pods

A3010 HCCS Hard Disc Multi-Podule	
80Mb + User Port + 2 Slots	£225
160Mb + User Port + 2 Slots	£315
250Mb + User Port + 2 Slots	£475
A3000 Internal IDE Hardcards	
80Mb + User Port	£185
160Mb + User Port	£275
250Mb + User Port	£415

See also top of page for other hard discs
Please call for SCSI Hard Discs.

Scanners/Digitisers

ScanLight Video 256 A5000/RiscPC	£199
ScanLight Video 256 A3000-A4000	£205
Canon IX-4015 Colour SCSI Scanner	£620
Above includes !TWAIN/ImageMaster & Cabl	
Vision24 Colour Digitiser	Int £96/Ext £109
Hi-Vision24 Digitiser A5000	Int £134/Ext £149

RiscOS 3.1 Upgrades

A300/A440 Series (inc carrier board)	£97.88
A400/1, A3000, A540 Series (In stock)	£75.75
Bulk Pack of ten upgrades	£339.00
Please add £4 (Inc VAT) carriage to RiscOS	

Printers (Include Cable)

Canon BJ-200 (360dpi)	£210
Canon BJ-230 (360dpi)	£280
Canon BJC-600 Colour (360dpi)	£360
Canon BJC-4000 Colour (360dpi)	£300
Epson Stylus Colour Printer (720dpi)	£360
HP LaserJet 4L 4ppm (300dpi)	£429
HP LaserJet 4P 4ppm (600dpi)	£629
Add £40 to above printers for TurboDriver	

Printer Consumables

BJ-10 Ink Cartridge (BC-01)	£17
BJ-200 Ink Cartridge (BC-02)	£18
BJ-300 Ink Cartridge (BJI-642)	£16
BJ-600 Black Cartridge (BJI-201bk HC)	£7
BJ-600 Colour Cartridge (BJI-201)	£8
BJC-4000 Black Cartridge (BCI-21Bk)	£9
BJC-4000 Colour Cartridge (BCI-21C)	£17
BJC-4000 Fast Black Cartridge (BC-20)	£28
BJ-800 Black Cartridge (BJI-643)	£16
BJ-800 Colour Cartridge (BJI-643)	£20
DeskJet500 Mono/Colour Cartridge	£21/£23
EP-L Toner (LBP-4/HP LJIII)	£59
HP 92274A Toner (HP LJ4L)	£59
JP-150 Ink Cartridge (Acorn)	£22
Swift24 Mono/Colour Ribbon	£7/£15

Books (No VAT)

Acorn RISCOS3 PRM's	£99.00
Add £7 (Inc VAT) carriage for PRM's	
Acorn 5th PRM covering RiscOS3.5	£29.00
Acorn BBC Basic VI Guide	£10.00
ArtWorks Made Easy (Dabs)	£14.95
Begin's Guide to WIMP Prog	£12.95
DTP on the Archimedes (Sigma)	£12.95
First steps in prog RiscOS (Sigma)	£14.95
Game Maker's Manual (Sigma)	£14.95
RiscOS 3 First Steps (Dabs)	£14.95
Add £2 Carr to above (£4 for Acorn books)	

Terms

EC residents add 17.5% VAT to all prices except books. Carriage free in UK (excluding remote areas) (except books), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Restocking fee on non-faulty returns. Official orders welcome from educational institutes, chq with order under £30. E&OE.

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-Spelling (over 9)	£18
-Driving Test	£10
-Dinosaurs (all ages)	£10
Crystal Rain Forest (Sh)	£33
Darryl the Dragon (4M)	£18
Fun School 2	£17
(Spec age group ,<5, 5-8, >8)	
Fun School 3	£17
(Spec age group ,<5, 5-7, >7)	
Fun School 4	£17
(Spec age group ,<5, 5-7, >7)	
Granny's Garden (4M)	£23
KidPix (ESM)	£37
Noddy's Playtime (JBn)	£20
Playdays (Gamesware)	£21
Rosie & Jim	
- Duck loses its Quack	£10
- Jim gets the sneezes	£10
Call for titles not listed	

Desktop Projects Ltd

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Access VISA SWITCH

APR 95

New Teletext software from XOB

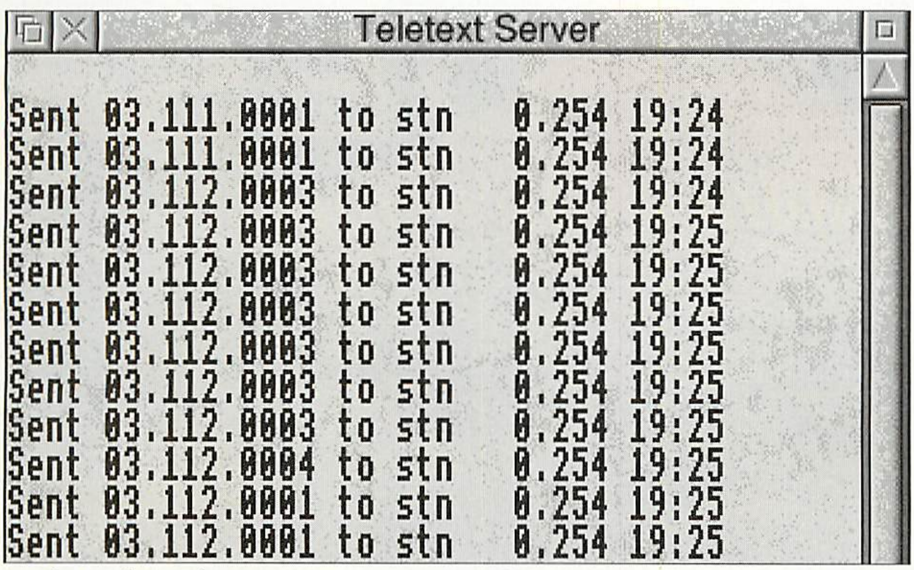
XOB's teletext card has been around for some time and many, like me, use server/client software to provide all network users with live teletext. In a school this is an invaluable resource as the cost of the downloadable data is free – once the teletext card, software, an aerial and a television licence has been provided. The software works very well in most situations, but on larger networks where traffic is consistently heavy it can be rather slow, so XOB has produced a faster version called *Teletext Turbo* which will sell alongside the existing software.

Teletext Turbo overcomes the slowness of Teletext by cacheing pages to the serving computer's hard disc as soon as it is powered up. As a result, all pages from all channels are available almost instantly and it also means that even if the television signal is lost, the software can still deliver pages to clients. If the signal is still present, the software can check on the cached pages and update them if necessary. You'll require about 8Mb of hard disc space for *Teletext Turbo* to cache all the pages from the four terrestrial channels.

Additional features include the ability to have more than one teletext card in a computer. Each card can be set to grab pages from different channels, or even satellite and terrestrial channels. Included with the software is a teletext page editor which enables users to create their own pages, and managers to operate a local teletext 'in-house' service.

Note to Network Managers: having run XOB's Teletext application on the network, I have concluded that it's best served from a dedicated Teletext-serving computer, although that makes it a very expensive resource indeed if you add the cost of a computer to the cost of the teletext card and the software. Many users will therefore be looking for ways to 'double up' with another application server. If this must be the case, I think it's probably best to double up with a CD server, but not with a printer server – definitely not if you run the non-Turbo version.

XOB
Tel: (01307) 840364



Free data to all network users.

Tip for the month

THIS month's tip is for software writers. If you're developing a program intended for use by the network manager only, do not protect it with a password. Such programs (together with their default password) could be purchased by individuals who are non-privileged network users and this can result in them doing things on the network which is at best undesirable and at worst illegal in terms of data protection. It is far better to prevent the program from running unless the user has logged on with system manager privilege – as is the case with management software such as *NetManage* and *Supervisor*.

New Acorn products

Acorn revealed several new networking products at the BETT Show in January.

Enhanced Access

Access is the name given to Acorn's peer-to-peer networking solution. Essentially it enables a user to establish a small network allowing resources such as printers and hard discs to be shared. Access has been upgraded and is now sold as *Access2*, which will also be available as a ROM upgrade to existing *Access* users. *Access2* offers several benefits including faster access. *Access+* is an alternative product and is aimed at secondary schools where a higher level of security is required. Finally, *Access CDShare* is a program to enhance enable clients to access a CD-ROM drive.

OmniClient

Several schools now use PC networks for administration and *OmniClient* will allow an Acorn computer to sit on the network and share printers and files. Apart from PC networks, *OmniClient* will enable Acorns to reside on several networks including NFS, with others planned for the future.

The winged messenger brings e-mail

Acorn's e-mail application code-named *Mercury* – after the messenger of the gods – was officially released at BETT as *InterTalk*. It provides network users with in-house e-mail as well as access to Internet – provided a suitable modem is connected to the serving computer. Although the user base does need to be set up separately from the AUN user profiles, the information can be quickly entered from a CSV file which may be generated by a network management application such as *Manager* or *NetManage* from the user profiles.

This is a program which has been long overdue on the Acorn platform. Networks are becoming larger and many now extend beyond a single room, and some to separate buildings. On a site-wide network, the facility of sending internal e-mail could have enormous benefits.

Acorn Computers Ltd
Tel: (01223) 254254

Contacting me

You can contact the Network page by writing to me, Geoff Preston at *Acorn User*, IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: gpreston@arcade.demon.co.uk

Cover CD-ROM and disc

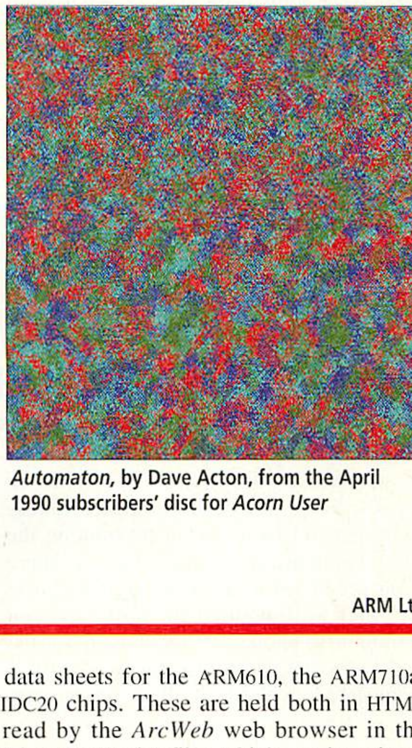
The spirits of Acorn User and Acorn Computing past

Countless authors

The *ACORNUSER* directory on the CD-ROM contains a library of past cover and subscription discs from both *Acorn User* and *Acorn Computing*. The *Acorn Computing* archives go back to the re-launch of the magazine in October 1992; the *Acorn User* ones go back a full five years to April 1990. The discs are pretty well complete – some software has been removed because there are more up-to-date versions elsewhere on the disc, or because it was a time-bombed demo – and they include software which will only run on the 8-bit range of computers. Not that we're expecting anyone to hook a BBC B up to a CD-ROM drive, but it seemed at least possible that someone might want to copy the files to their 8-bit system, so they stayed on there. Therefore, if you find something that won't run on your Risc PC, or even your A310, it's probably not meant to.

The *Acorn Computing* menu program is also supplied on the CD-ROM – in the *ACMENU* archive – to provide an easy way of accessing the *Acorn Computing* cover disc archives. Simply run the menu program and drag the archives to the icon on the icon bar.

Also in this directory is the complete February edition of *Acorn User* in *Impression Publisher Plus* format. The files should load into the latest version of *Publisher*, and may also load into *Style*, but this is not guaranteed. Some of the files require more than 8Mb of RAM to load properly. They are provided more as a curiosity than as a practical way of viewing the magazine.



Automaton*, by Dave Acton, from the April 1990 subscribers' disc for *Acorn User

ARM data sheets

ARM Ltd

ARM

Advanced RISC Machines

This directory contains data sheets for the ARM610, the ARM710a, the ARM7500 and the VIDC20 chips. These are held both in HTML format (which can be read by the *ArcWeb* web browser in the *INTERNET* directory) and as PostScript files which can be printed to a PostScript printer.

The data sheets are not finalised, and are part of an intended release later this year. All the individual GIF files can be viewed using *ChangeFSI*; there are *Draw* versions of most of them (better quality but unreadable by *ArcWeb*) in the archive as well.

Acorn User is extremely grateful to Simon Glass of ARM Ltd for assembling the data sheets for us.

Acorn files

Acorn Computers Ltd

Acorn has kindly donated all the public files on its ftp site to the *Acorn User* CD-ROM. This includes a wealth of documentation, from past Customer Hotline columns in *Acorn User* to application notes on all machines from the Electron to the Risc PC. Everything you ever wanted to know about Acorn machines and a lot you didn't is contained within these files. Browse at your leisure.

Many of the files in this directory are compressed using David Pilling's *Spark*. These are identified by a directory icon with a yellow flash running across it, and can be de-archived using *SparkPlug* provided in the directory. Note that *SparkPlug* will not allow applications to be run from within *Spark*-format archives; they must be de-archived by dragging to another disc first. A further complication is that some copies of *ArcFS* will attempt to read the *Spark*-format archives and fail. If you encounter problems, try dragging the archives to the *SparkPlug* icon on the icon bar to force it (rather than *ArcFS*) to open them.

In the *FTP.RISCOS* directory is a collection of Acorn applications and utilities. This includes the App1 and App2 discs supplied with RISC OS 3.1, as well as the *DrawFile* module version 1.30 the *NewLook* desktop for *RISC OS3* and a number of other goodies.

Commercial demos

Numerous authors

The *DEMOS* directory contains one of the largest – if not *the* largest – collections of commercial demos of software ever assembled in one place. This is in addition to the numerous demos which are also to be found on the past cover discs in the *ACORNUSER* directory. For instance, most Krisalis games have at one time or other had a demo on either the *Acorn Computing* or *Acorn User* cover disc, so they can be found there.

The demos range from multimedia presentations which lead you through the features of a package to complete packages with a couple of features – usually printing and saving – disabled. There should be something here to interest all computer users, and you might be pleasantly surprised at some of the features of programs you would never have otherwise considered buying.

Please note that while every effort has been made to keep the information accompanying these demos up-to-date, prices and products may have changed since the demos were written. Wherever possible, check with the companies concerned before buying.



An exclusive treat from Eclipse; the full intro sequence to *Dune II*. This was considered too big to release with the floppy disc version of the game, but may be added to a possible CD-ROM release later this year, if there is enough interest. Go on – show some interest!

The *DECADES* demo from Longman Logotron in the root directory is a demo of the Decades CD-ROM. For reasons best known to Longman Logotron, they have hard-wired some file path information into the software, with the result that the demo will only run from the CD-ROM in drive zero. Users of multi-CD-ROM drives beware!

Locked software

Creative Curriculum Software

In a pioneering move, CCS has supplied a number of its titles in a 'locked' form on the CD-ROM. These are complete packages and can be accessed by running the *CCS* application on the CD-ROM. Have your credit-card handy, though, because in order to download the software you will have to phone up CCS and pay for the software. CCS will then reply with a unique code which will allow you to copy the software to your hard disc, and CCS will then send manuals, boxes and so on by post.

It really is that simple; phone up, pay, type in the code you are given, and the software is yours. Much of the CCS software is available in a demonstration version in the *DEMOS* directory on the CD-ROM, so you can try it before you buy.

The software available for download is: *MathsCard*, *Report Writer*, *Conjugez!* (all three versions), *Spelling Book* and *Trip*. You can order the *Langdale*, *Mechanisms* and *Woodland Birds* CD-ROMs, but for obvious reasons (size) these cannot be downloaded.

Creative Curriculum Software
Tel: (01422) 340524
Fax: (01422) 346388

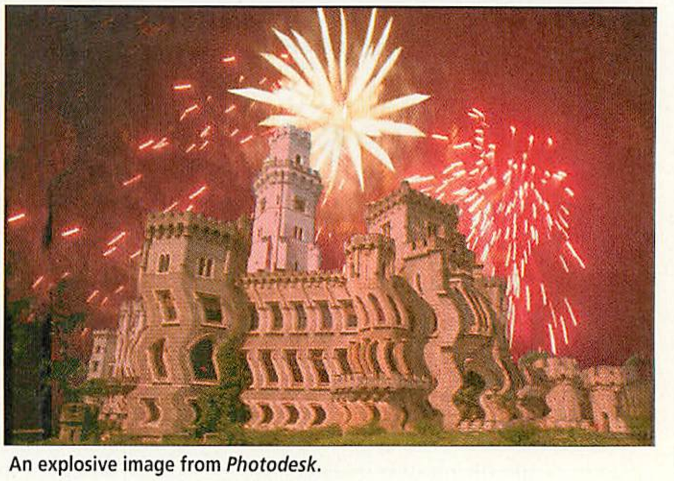
Clip art

Various authors

The *CLIPART* directory contains a mixed bag of files. *Portfolio* from Computer Concepts is the viewer which comes with the *ArtWorks* clip-art CD-ROM. On this disc, most of the *ArtWorks* files are missing, but all the thumbnails of the pictures are present so that you can see the complete catalogue of *ArtWorks* files on the CD-ROM. Those *ArtWorks* files which are present can be dragged to the *AWViewer* application for viewing in more detail.

The *PHOTODESK* archive contains a number of archives designed to showcase Spacetech's bitmap graphics package *Photodesk*. They are all in JPEG format and can be viewed using *ChangeFSI* (from the *ASTROIMAGE* directory). Taken together, they really show off the creative power of this package.

Lastly, in the *RAYTRACE* directory there are some examples of ray-traced images. These are in yet another file format – Targa – but thankfully the ubiquitous *Change*FSI handles this as well. Simply drag the files to *Change*FSI's icon on the icon bar.



An explosive image from *Photodesk*.

The cover disc

Various authors

No, it's not been forgotten in the heady euphoria surrounding the CD-ROM. Our cover mount for readers without CD-ROM drives continues this issue. As usual, there are programs to tie in with the C for yourself and the *INFO sections of the magazine.

The *C* archive contains four programs demonstrating different methods of program flow control in C. These are heavily commented; as usual the source for the programs is in the *c* sub-directory in the archive, with the compiled program in the root directory.

StarInfo contains a number of exciting and interesting little programs including an updated version of *3DRamFree*, which had been causing problems before. There is also an ancient traditional Viking game, and a model of Buckminsterfullerene, the football-shaped molecule composed of 60 carbon atoms.

The *DTPAids* directory contains the answer to a plea that we published a few issues back, which was for a set of borders for use with *Impression* that would give proper square borders. The borders here fit the bill, and are presented in a number of sizes. They are based on a set of borders sent in by *Acorn User* reader Michael Marshall. Other point sizes of borders can be obtained as described in the *!Help* file in the *DTPAids* directory.



Lastly, but by no means least, the *Internet* directory contains the first part of the Internet starter pack compiled by Dr Alan Hassey. As the pack is so large, we are having to spread it over several issues, and the software to access the Internet itself will not appear until the next issue. Most of the documentation is included in this archive, and while you are waiting for the next instalment you should read at least the *StarterTXT*, *Guide* and *AcornFAQ* files, which will give you an idea of how to use the pack and how to connect to the Internet using your Archimedes. These files are written assuming that the reader has the whole starter pack, so some parts will not be relevant until later.

Although the *DemConfig* application is provided, you will not be able to run it yet, as the applications to be configured are not all present. The applications in this archive will be needed for the other applications in the starter pack to work, so keep them safe.

The full Internet starter pack is provided on the CD-ROM.

Questions about the CD-ROM

Q. Why are all the file names in capitals?

A. The ISO standard for CD-ROMs only permits a limited range of characters in filenames, which doesn't include lower case letters.

Q. Why is some of the software archived?

A. Quite apart from there being too much uncompressed data to fit on the CD-ROM, archives allow standard RISC OS-style filenames to be used, and are essential for files containing top-bit-set characters.

Q. Okay, so why isn't *all* the software archived?

A. Some programs would run direct from the CD-ROM, but not from an archive – *Dune II* being a prime example. Besides, there is less chance of the data being corrupted if it wasn't archived.

Q. This is a 'collector's CD-ROM'. Will it be part of a collection of more than one?

A. There may well be further *Acorn User* CD-ROMs, though it is never likely to be a monthly feature. Largely, it depends upon the reception given to this CD-ROM.

Q. Why is the *PlayAVI* program on the disc twice?

A. The version in the *SHAREWARE* directory is an out-of-date version which escaped deletion and was only noticed after the Gold disc had been created. Use the one in the *DEMOS.J_TO_R* directory.

Q. I've tried to run a program and it says it needs such-and-such a module. How do I find it?

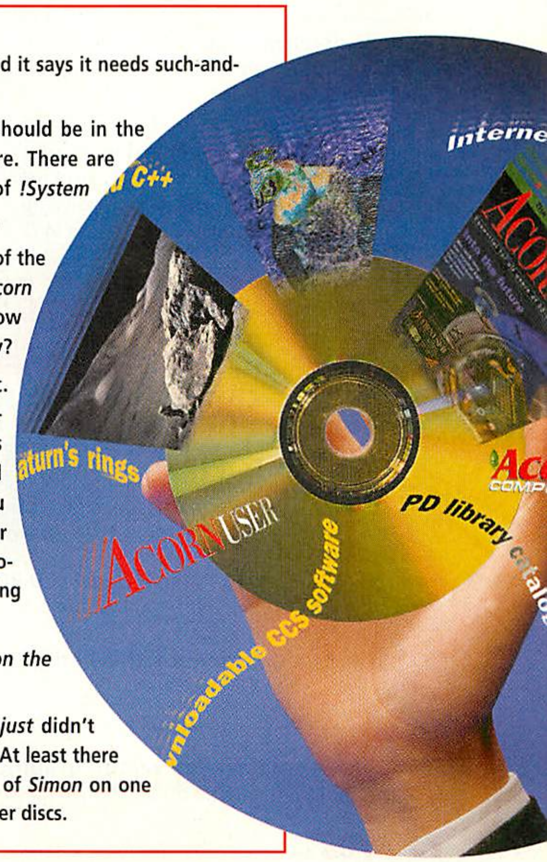
A. If it is an Acorn module, it should be in the *ACORN.FTP* directory somewhere. There are also a number of other copies of *!System* on the disc in appropriate places.

Q. I've double-clicked on a copy of the *!Scrap* directory in one of the *Acorn Computing* disc archives, and now none of my software works. Why?

A. You didn't want to do that. These copies of *!Scrap* are provided solely so that the archives can be copied to floppy and used on a floppy-only system. You should never use them as your *!Scrap* directory, as *!Scrap* directories *must* be on a read/write filing system. Don't do it again!

Q. Where is the promised *Simon the Sorcerer* CD demo?

A. To our immense surprise, it *just* didn't make it in time for the CD-ROM. At least there is a demo of the current version of *Simon* on one of the past *Acorn Computing* cover discs.

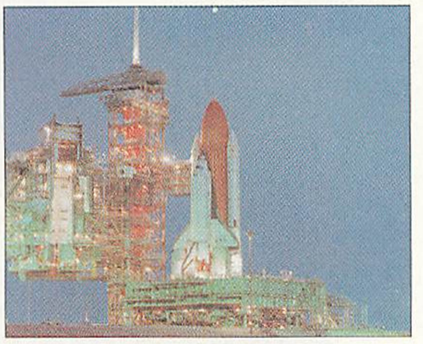


Images from space

Mike Cook

He hasn't got any pages in the magazine this month, but we found Mike Cook space on the CD-ROM. *Acorn Computing*'s longest-standing and most regular contributor has assembled a dazzling array of space-related images, from the beauty of the Horsehead Nebula to the drama of the Shoemaker-Levy-9 comet's impact with Jupiter.

Most of the images in this directory are stored in GIF or TIFF file format. These can be converted to sprites by using *ChangeFSI* (also supplied in this directory). Drag the files to the *ChangeFSI* icon on the icon bar and it will convert them. Unfortunately, a few of the JPEG images are not compatible with *ChangeFSI*, but anything else which reads JPEG format should handle them. This includes the *ImageBank* demo in the March 1994 *Acorn User* cover disc archive. The *FILES2.Ozone* directory contains a number of interesting animations showing changing ozone patterns over the Earth for selected months. Similar animations to these and many other Meteosat images are available from Musbury Consultants.



Musbury Consultants
Tel: (01706) 216701

Public Domain software

Numerous authors

The vast quantity of selected Freeware and Shareware on the CD-ROM is best sorted through at your leisure. Everyone will have their favourites, but especially recommended are: *Bloxed*, an excellent and addictive Tetris variant; *Longfiles*, to give long filenames in the desktop; *Tex*, a complete and very good port of the professional typesetting program TeX, with associated resources; and *Image*, Ian Palmer's excellent Shareware image processing application which works in full 24-bit colour.

Remember that if you find a Shareware program useful, you are obliged to register with the author by sending a sum of money. See the documents accompanying each program for details of this. The *CATALOGUES* archive has the full catalogues for three well-known PD libraries which should satisfy the curiosity of those of you hungry for more of this free and nearly free software.

The *INTERNET* directory contains a number of useful resources to connect you to the Internet. The full *Internet Starter Pack* is here, complete with instructions (the pack is also being published on the cover disc, in instalments). Two browsers for the WWW are provided – *ArcWeb* and *Webster* – which may also be used to read the HTML files in the *ARM* directory. Finally there are Ben Summers's HTML tools which enable *Impression* users to design WWW pages – these are Shareware and must be registered if used.

How to use this CD-ROM

The *Acorn User* CD-ROM is packed full of files, so much so that there is no hope of listing them all, either in the magazine or on the *!Help* files on the CD-ROM. Although a specially-written copy of the *Menu* application has been provided to give a familiar interface to the disc, this can only act as a guide to the disc's contents.

The best way to find out what is on the disc is to simply browse through it using the standard Filer interface. Most of the programs and resources on the disc have documentation with them to explain how to use them and what they are intended to do. Don't try to find everything on the disc in one go – explore a different directory on a different occasion – and enjoy the variety of software on the disc.

Many files on the CD-ROM are compressed using *ArcFS*. These can be identified by the normal directory icon with a small yellow flash in the top corner. A read-only version of *ArcFS* is supplied in the root directory which should open the compressed archives. Experience has shown that sometimes (rarely) *ArcFS* will fail to open an archive properly on one occasion and succeed the next time for no apparent reason, so persevere. There are no known problems with the archives on the CD-ROM, although some programs may refuse to run from them, and will need to be copied to another disc first.

Because access time to a CD-ROM can be slow, some software which constantly reads data from the CD-ROM will run more quickly if it is copied to a hard disc first.

Win a VTi/SONYCD-ROM drive

Acorn User has teamed up with VTi and SONY to bring you the chance to win a CD-ROM drive for your Archimedes. We have four drives to give away: two internal IDE drives for the Risc PC and two external SCSI drives for older machines. To win one of these drives answer the questions given below and complete the tie-breaker phrase in not more than 30 words.

1) Which company sells the *Langdale* CD-ROM?

....

2) What is the name of the Kodak standard for storing photographs on CD-ROM?

....

3) Which commercial vector graphics package for the Archimedes is available on CD-ROM?

....

Tie-breaker: I want a VTi/SONY CD-ROM drive for my computer because: ....

....

....

Name: ....

Address: ....

....

Daytime phone number: ....

Type of Acorn computer: ....

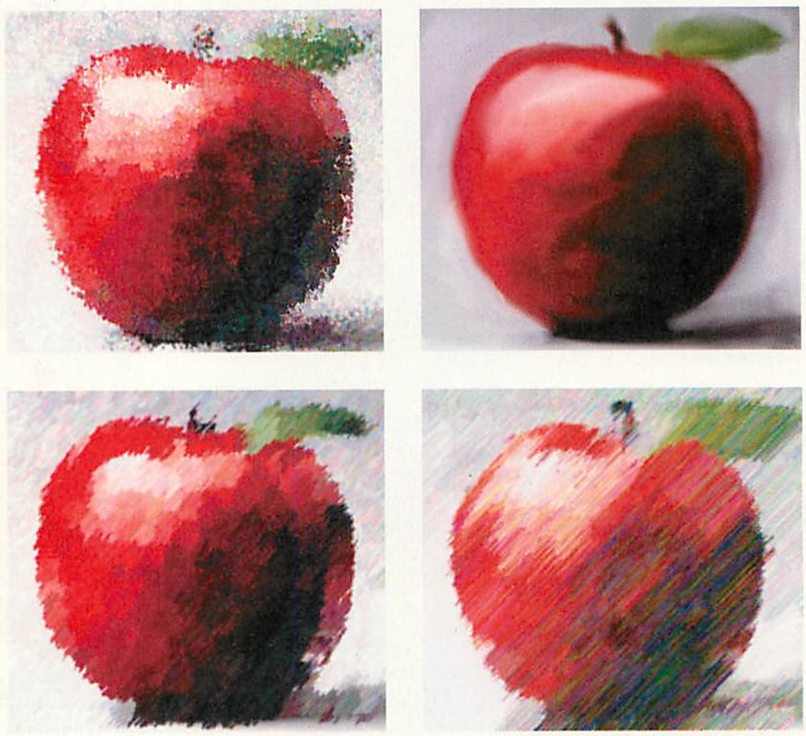
I would like to win an IDE/SCSI CD-ROM drive *(please delete)*

The editor's decision on the winners is final, and no correspondence will be entered into. All entries must be received by the end of April to qualify; winners will be announced at the *Acorn User* show on 6 and 7 May and will be notified by post. Entries should be sent to: *Acorn User* CD-ROM drive competition, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

PRO ARTISAN

24

UNLEASH THE ARTISTIC POTENTIAL OF THE Acorn Risc PC



ProArtisan 24 is the latest development in the hugely successful Artisan series. Designed specifically for the Acorn Risc PC, ProArtisan 24 exploits the enormous artistic potential offered by allowing the use of 16.7 million colours for image creation and display.

This means that the computerised tools provided, such as chalk, water colours and pastels, mimic their natural counterparts very closely. Add to this ability to load Photo CD images in full 24 Bit colour and what you have is an exceptional painting package for your Risc PC, with the added benefits of many powerful image processing tools.

Acorn RISC PC

A fact pack is available which includes a demo version of the software.

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Battle of the platforms

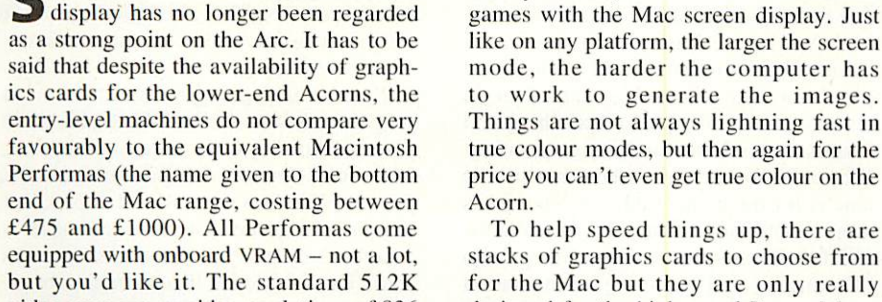
Ask competent graphic's artist what their favourite package is, and nine out of ten will talk about PhotoShop, Illustrator and the Macintosh. But Acorn packages do compare well with the Mac, as Jack Kreindler explains.

Since the turn of the decade, the screen display has no longer been regarded as a strong point on the Arc. It has to be said that despite the availability of graphics cards for the lower-end Acorns, the entry-level machines do not compare very favourably to the equivalent Macintosh Performas (the name given to the bottom end of the Mac range, costing between £475 and £1000). All Performas come equipped with onboard VRAM – not a lot, but you'd like it. The standard 512K video memory provides resolutions of 836 x 624 in 256 colours, and apart from the bottom of the range Performa 460, which can only be upgraded to 768K, there is support for an additional 512K to give 1152 x 848 in 256 colours, and lots of other smaller resolutions in thousands and millions of colours.

The Mac desktop is very space efficient and gives a deceptively big screen for any given resolution – perhaps it's something to do with the icon bar or the font they use. Whatever it is I cannot put my finger on it (whenever I do, I leave greasy marks on my screen). But it's not all fun and games with the Mac screen display. Just like on any platform, the larger the screen mode, the harder the computer has to work to generate the images. Things are not always lightning fast in true colour modes, but then again for the price you can't even get true colour on the Acorn.

To help speed things up, there are stacks of graphics cards to choose from for the Mac but they are only really designed for the higher-end Power Macs. Power Macs come with a 512K DRAM video system for the entry level 6100, but you have to pay a huge £3500 before you can upgrade your Mac to anything more than 2Mb VRAM, and the 4Mb expansion cards or AV accelerators are far from cheap as well.

The Risc PC is the ultimate in upgradability for home computers and its video capabilities, though limited to 2Mb of VRAM, certainly give an unmatched performance for resolutions up to 1600 x 1200 in 256 colours and 16 million colours up to 836 x 624. But hardware is only a small part of the picture. How does the software match up?



Painting packages

The main name in painting programs on the Mac is *Painter*. This aptly-named program, in conjunction with a pressure-sensitive graphics card, gives a real artist's studio feel. But its real-world effects don't come cheap. At £375, *Painter* costs more than any other Acorn graphics product in existence. Many effects that would otherwise be very difficult, if not impossible, to achieve on a computer, are made possible: painting in water colours, pastels, charcoal, crayons – you name it, it's got it. For £75 there's a substantially cut-down version which is good value.

The Acorn has a lot to live up to here, and a lot of man hours to catch up with in development time. In the short time that the Acorn platform went 24-bit, an astonishing number of big products have been mustered up, as anyone who has read me rabbiting on in the last year will know. The contenders of the 24-bit bitmap packages for painting are *ProArt 24* and *Studio 24*. They are half the price of *Painter* and *ProArt* does almost as much, even if a little more care and retouching is required to achieve the same 'absolutely natural' look that *Painter* gives you first go. But the Acorn products are very much faster in operation than the occasionally sluggish Mac, and they provide good photo retouching facilities too. If I was loaded, *Painter* would be my choice, but for value's sake, *ProArt 24* (plus a program like *Studio 24*, which would be less together than *Painter* alone) comes out tops.

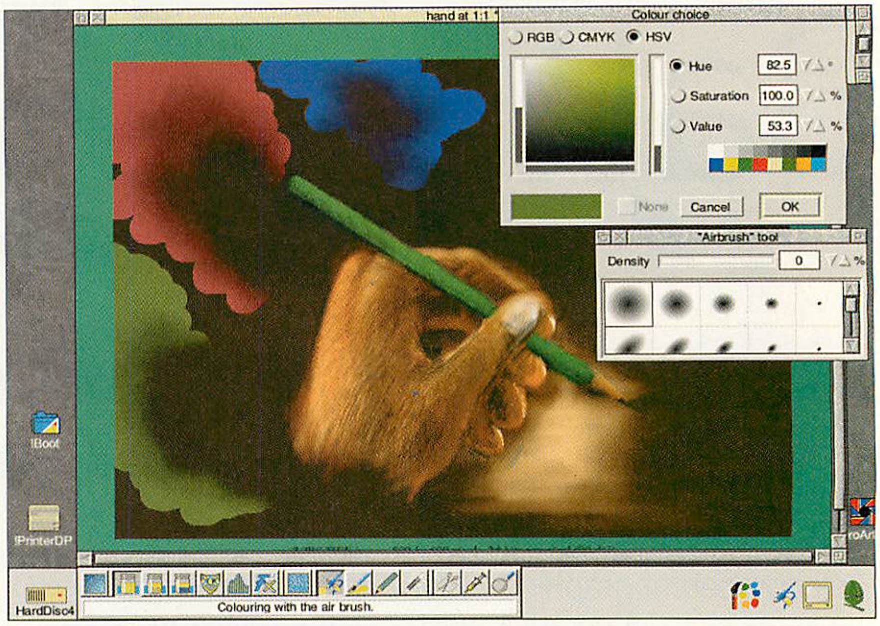
Vector packages

Adobe Illustrator is the industry standard, shadowing all other vector products in sales including the accaimed *Aldus Freehand*. The question that has always been in my mind is why is this? The problem with all the Mac vector products is speed, in which they are all seriously

deficient. Screen redraws are so dreadfully slow, even on a Power Mac.

Vector and *ArtWorks* are the two big vector players on the Acorn. The former is somewhat more orientated towards draughting and technical drawing as opposed to artwork, where *ArtWorks* is king. As well as speed advantages over *Illustrator*, which incidentally costs £480 (bye, bye bank balance), *ArtWorks* is supremely better at rendering the screen images with its anti-aliasing system. Compared to *Illustrator*'s bitty staircases, *ArtWorks* appears in a different league. But *Illustrator* does have some fantastic features which would only appear as *ArtWorks* modules in an Acorn user's wildest dreams. Most desirable tools such as intersecting and graphics filling have been the foundation of *Illustrator*'s strength – why on earth were these features not implemented in *ArtWorks*, and why hasn't anyone had the financial sense to develop these as *ArtWorks* modules?

In my opinion, the undisputed heavy weight vector graphics title of the world still goes to *ArtWorks*, though *ArtWorks's* severe lack of anything other than primeval text capabilities did give *Illustrator* a far worthier second place than it would have had otherwise.



RISC OS allows multiple windows to be open and two tools to be active at the same time. Brushing with the left mouse button and unbrushing with the right is impossible on a one-button Mac mouse.

Photo retouching

Photoshop. What more can you say? *Photoshop*, after Windows and a host of famed word processors and spreadsheets, is *the* household name in computer software. A year ago I would not have thought it possible to compare this Adobe giant to any Acorn software, but things have changed.

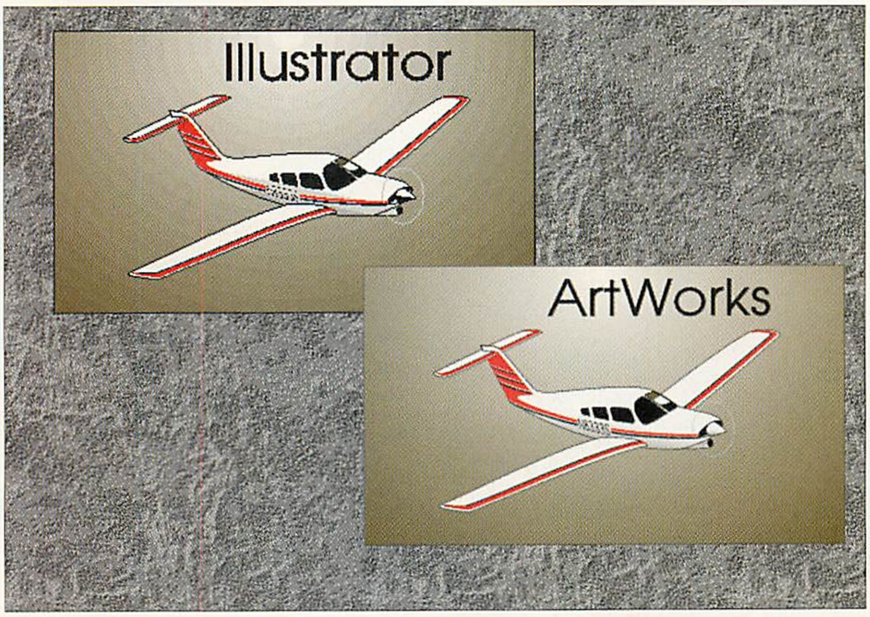
It must be said that *Photoshop* is huge in every aspect, from the room it occupies on your hard disc to the amount of memory it consumes. Even the markets of third-party 'plug-ins' and *Photoshop* literature are bigger than any Acorn software market. But at £725, it's also hugely painful to buy.

For that kind of dough you can buy any of the Acorn photo retouching packages and have enough change for a 17in monitor. And there isn't much you can't already do within the bounds of the Acorn platform that *Photoshop* can offer in terms of traditional photo retouching and image manipulation and image creation. Where *Photoshop*'s price becomes justifiable is for the higher-end user who wants more colour tables than there are colours, and for whom special effects like pseudo 3D warping and rendering, texturisation and *Painter*-style effects are imperative for your work.

As yet, the Acorn products don't offer the same level of exotic effects, though the vast variety of ones on offer in *Studio 24* do represent a large proportion of the effects available on the Mac, including some only found in plug-ins, and the flexibility and speed of *Photodesk*'s tools enable very complex effects to be executed much faster and more interactively than in *Photoshop*.

Photoshop, having been around for a long time, has evolved greatly and become a very refined system, with piles of accelerator cards around designed to finish the job almost before it has started. I think that if you are a professional design house or imagesetting bureau then *Photoshop* is a must, but I would not like to produce original artwork or do extensive compositions in the program. The terribly restrictive nature of the front-end, such as the way you cannot undo further back than the last brush used – and even then you have to change tools to do so – and the way you can only have one task or window open at one time, really limits the productivity of the program for creative artwork.

The score's Acorn 1, Mac 1 here – the Acorn wins in the value division but it doesn't have enough to compete in the Premier league.



Rendering of vector files in *ArtWorks* is in a different league to that in *Illustrator*.

Video

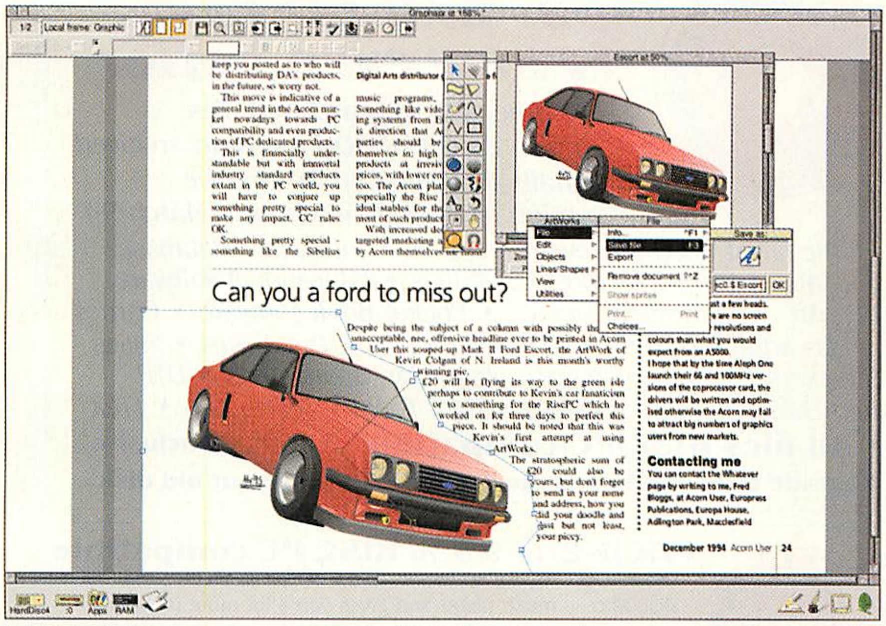
You might have noticed a trend in this article so far – the fact that Mac stuff is not exactly cheap. Well, if you thought £795 for a bitmap package was dear then you're going to have to do some radical redefining of your understanding of expensive.

The Mac multimedia and video editing equipment is iconised by the Avid brandname. To buy a piece of the pie in this area will cost you around the price of a middle of the range Merc, irrespective of the cost of the Power Mac required, and to have your cake and eat it will set you back about the price of a one-bedroom flat (£42,500 for the Avid Film Composer). The January

issue of *Acorn User* looked at the Acorn alternative in more detail, but suffice to say the Eidos-Apex joint venture promises to bash the living daylights out of Avid systems in terms of performance, and at a fraction of the price. Eidos hopes that within the next few months the Risc PC-based system will easily outperform the fastest Power Macs all for about £10,000, and it looks as if they are going to live up to their own expectations.

The Movie Magic MPEG decompression card is also a good cheap option, and the stunning thing is that the Mac market still doesn't have an MPEG decompression card. However, this may all be academic in the future as MPEG will be replaced by MPEG2 (near broadcast quality video) and Eidos could also become a big contender in the quality video stakes, with its incredibly efficient software decompression systems.

My advice is, if you are planning to go into video editing or get yourself digital video equipped, the Acorn platform is worth sticking with.



Having two programs such as a vector package and a DTP package open on screen at the same time is not possible on the Mac. Fully visualised OLE is indispensible on the Acorn for serious DTP.

Three dimensions

There really is no competition in this category I'm afraid. The Acorn is far and away the poorest platform for 3D graphics, except for the modelling package *Architech*, which despite its speed still lacks some of the features you need in a modelling package.

The Mac products range from the cheap (for the Mac) and cheerful to the sort of thing research groups use to realistically simulate the passage of water along a gutter, or leaves blowing in a turbulent wind.

The cheaper ones are not particularly fast but are reasonably priced for what they do – and consider that unless you have the artistic genius of Magritte and a huge degree of brush control, you will never be able to generate the kind of imagery that 3D rendering programs allow you to. There are many public domain text-based raytracers and renderers around for the Acorn platform as well, but they do not operate via a spline or vector-based system which basically rules them out for the mathematically challenged among us – myself included.

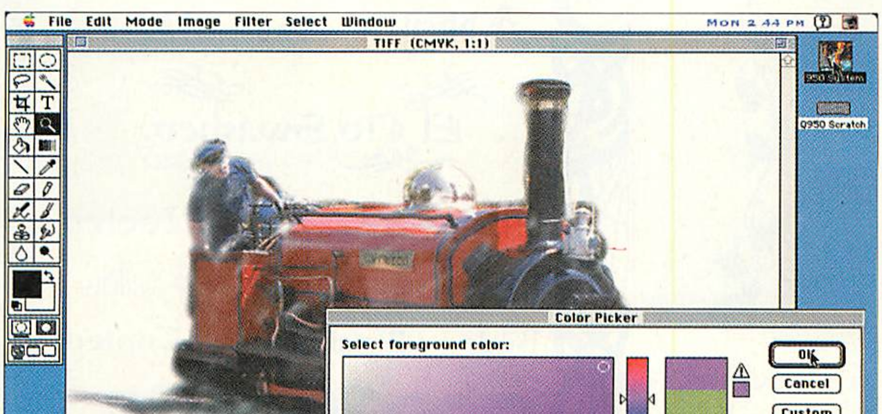
The Risc PC with multi-processor technology has such great potential for 3D graphics. I only hope some companies get on the 3D bandwagon and take advantage of the opportunity. Perhaps some already have.

Tracing programs

There are three tracing progams on the Acorn. David Pilling's *Trace* (£5), *Midnight Tracer* (£50) and *Tracer* (£80), all of which are dire in comparison to *Adobe Streamliner* which does such a good and fast job converting bitmaps to vector graphics files that you can only feel depressed that nothing like it exists on the Acorn. What's more, it only costs £135, which is pittance in relation to what it does.

Image translation

Image translation programs are too expensive on the Mac, in my opinion – you can get the same thing as PD on the Acorn. Unfortunately, you cannot get comprehensive vector file format translators for the Acorn and neither are there any DTP translators yet, though Computer Concepts' RTF converter should go some of the way to alleviating the problem.



PhotoShop's colour handling is far superior to the Acorn's, but its needs are specialised.

Conclusion

Money. Unfortunately, that is what it boils down to these days. The Mac platform charges lots for its software so it can develop it further to attract more people to buy Macs, and this is one reason why the Acorn third parties cannot afford to develop products to the same degree as Adobe can. As far as value goes, the Acorn is unbeatable and in many ways better than the Mac for graphics, despite being part of such a small market and hence much smaller profit margins than Mac software houses.

If the Acorn platform continues to grow and Acorn software houses try to push their products into the high end, like Sibelius, Eidos and Computer Concepts, the odds are on for the Acorn to reclaim its position, at least in some areas of computer graphics. AU

Next Month in ACORN USER



The Acorn User Spring Show

It's back, and it's bigger than ever. If you want to see the best in Acorn hardware and software, and the latest releases from the most important companies in the market, don't miss this year's Harrogate show. Next month we'll guide you round the show, telling you what each company will be doing, describing the theatre programme, and giving you all the details you'll need. Don't miss the show, and don't miss the Show Special.

Archimedes vs Risc PC

What exactly are the differences between Acorn's flagship computer and previous models? Technical guru Mark Smith takes us on a tour of the insides of Acorn's creations.

Apollonius PDT

Billed as the best CAD package for the Acorn platform, we put Oak Solutions' powerful system through its paces.

CableNews 2

Presentation graphics have never been Acorn's forté, but *CableNews 2* could change all that. We check it out.

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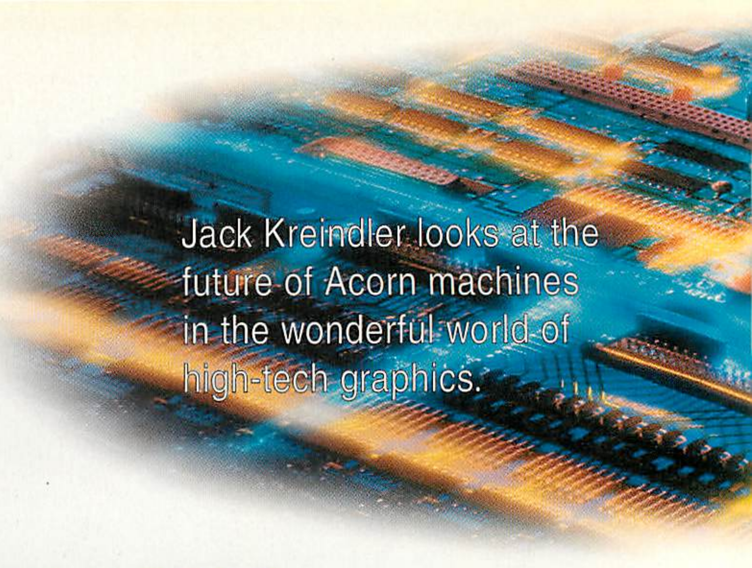
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Acorn User is published by IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP
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Jack Kreindler looks at the future of Acorn machines in the wonderful world of high-tech graphics.

Drawing the future

It's really strange how people are never satisfied with what they've got, especially when it comes to computer equipment. The future is never far away, but what does it have in store for the Acorn user?

Bitmap graphics

Radical changes in many software products are ready to hit our desktops in the photo retouching and painting world. Digital Arts' *DA's Picture* is getting a new RISC OS-look interface, hopefully donning RISC OS familiarity and usability as well. The program is of modular construction so 'plug-ins' can be made for the package, although it remains unclear whether anyone outside DA has been given or indeed wishes to have the guidelines for developing this extremely slick and speedy photo retouching package into a real *Photoshop*-killer.

Photodesk is also in a phase of change. This application is arguably the most versatile image manipulation package on the Acorn at present, but suffers from a severe inability to deal with big files in virtual memory with anything like the speed of *DA's Picture*.

Then there's *Studio 24*. Version 2 is already being beta-tested and if I didn't recognise Pineapple's same little paintbrush on the icon bar, I would have thought it was a completely new program. Having worked in close conjunction with a top Acorn reproduction house, and studying *Photoshop*, Pineapple has taken *Studio* from a plain painting program into a high-end feature-packed photo retouching and image processing package, with its old abilities still in full effect.

Studio 24 now features very fast virtual memory, an indefinite number of alpha channels, true CMYK colour modes and so many filters and effects it would take a book to write down all the new possibilities provided by the program. At only £125 + VAT, it also represents incredible value for money, as do *Picture* and *Photodesk*.



Studio 24 is getting better and better.

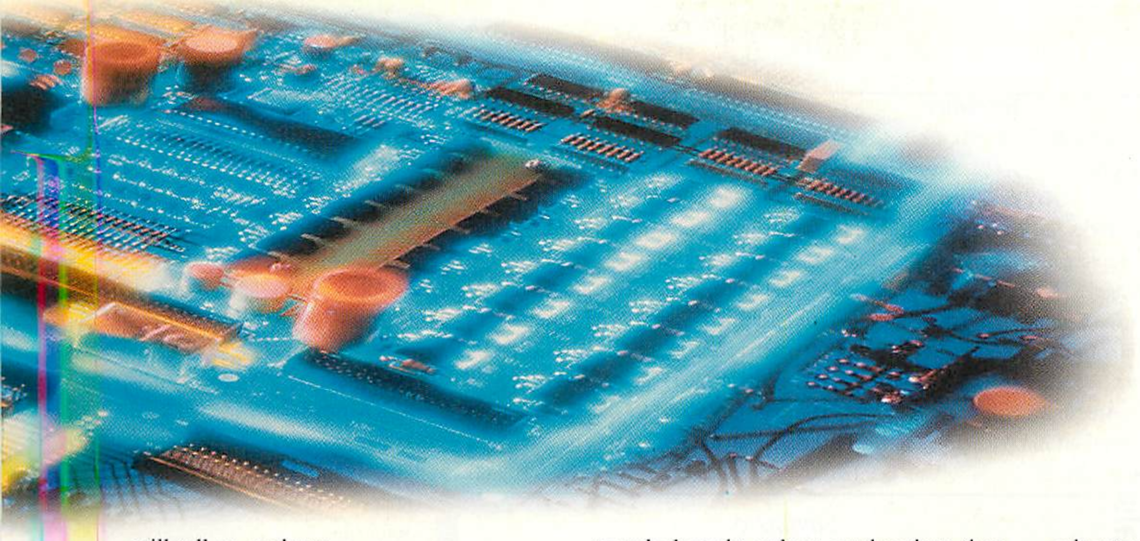
Co-processors and multi-processors

The Risc PC's open bus technology allows the main memory, video system and peripherals to be accessed via either the main ARM processor or a second processor, whether that be another ARM or a 80486-compatible chip or whatever. The only thing required is for the correct arbitration hardware (the interface chip or ASIC) to be built and hey-presto you've got a PC as well as an Acorn. The first co-processor, a 486 clocked at 33MHz, is presently trickling its way into the market in small numbers, and is the predecessor of very fast 486 chips heading our way in the near future, and hence opening the way to the world of PC-compatible graphics packages.

Now, I know many Acorn fundamentalists will be biting away furiously at their fists, and will have already draughted the second letter in the hate mail assault directed towards me, but please hold the line for a moment and you'll see why this may become a great asset to the Acorn platform and not a step towards obsolescence.

Believe it or not, the Acorn platform is highly regarded in the PC world. Not among the general users who still attach the Acorn brand name to the 32K Beeb and BBC Master, but among the key software developers in the PC world. It is a little known fact that there is a whole load of Acorn machines in the UK division of Microsoft, and if Microsoft can't be regarded as the top software house in the world then nobody can. When the Acorn becomes seen as a PC-compatible platform, providing the promised excellence of the video drivers comes to fruition, the Acorn platform will begin to attract serious attention from the big boys.

This will attract development time and piles of funding, and in conjuction with a powerful C++ compiler there is a likelihood that renowned PC products will be converted for the Acorn platform. This, in turn, will produce more sales of Acorn hardware, a wider market and yet more development incentive. And so the ball



will roll on, perhaps.

The next factor to consider is multi-processor technology. Five open bus compatible chips all working on a single graphics task would, for a few hundred pounds, give the same kind of performance as a middle of the range silicon graphics workstation, in exchange for a mortgage. This is something I am sure many software houses would be interested in exploiting if the machine is compatible with the more common operating systems.

Moving video

Even on RISC OS, there are current developments in the area of graphics which could become world showcases for desktop computing. Eidos, the video compression/decompression experts whose roots are planted firmly on Acorn ground, has exciting plans in its not-so-long-term diary.

Eidos hopes to able to deliver the same kind of video compression performance (presently available only at unspeakable costs) on the Acorn platform using multi-processor technology. Real-time video compression and playback will be of broadcast quality on such a system, which will cost around the same amount as a top of the range Power Mac, except the processor speed will be at least twice that of the Mac.

It is not just video specialists that have jumped onto the multi-processor bandwagon. 3D graphics and raytracing has always been a favourite among the PD and non-professional software authors on the Acorn platform. Though no details can be divulged for the moment, there does exist a number of parties who can see the enormous potential in a cheap ARM-based multi-processor system.

Whether they are just small projects born of a burst of enthusiasm or will be full, commercial applications, only time will tell. I hope it is the latter as the programming expertise hidden within the mass of Acorn programmers out there could easily produce the next *Sibelius* – a new industry standard developed on the Acorn and now the cause of much defection from inadequate PC systems.

DSP possibility

On the Mac and PC platforms there are masses of accelerator cards to choose from to speed up certain applications. It is a near certainty that in the same way as so many people bought colour cards when they were all the rave, so there will be a market for graphics accelerators for photo retouching programs. It would be a cheaper option in hardware and development terms to get a few DSPs all hooked together and the same advantages as experienced on other platforms would be gained.

There is rumour of 'something special' to be announced in the next couple of months, possibly as early as Harrogate, which may well be based around DSP acceleration, but this is another project which we will only find out about when it is released.

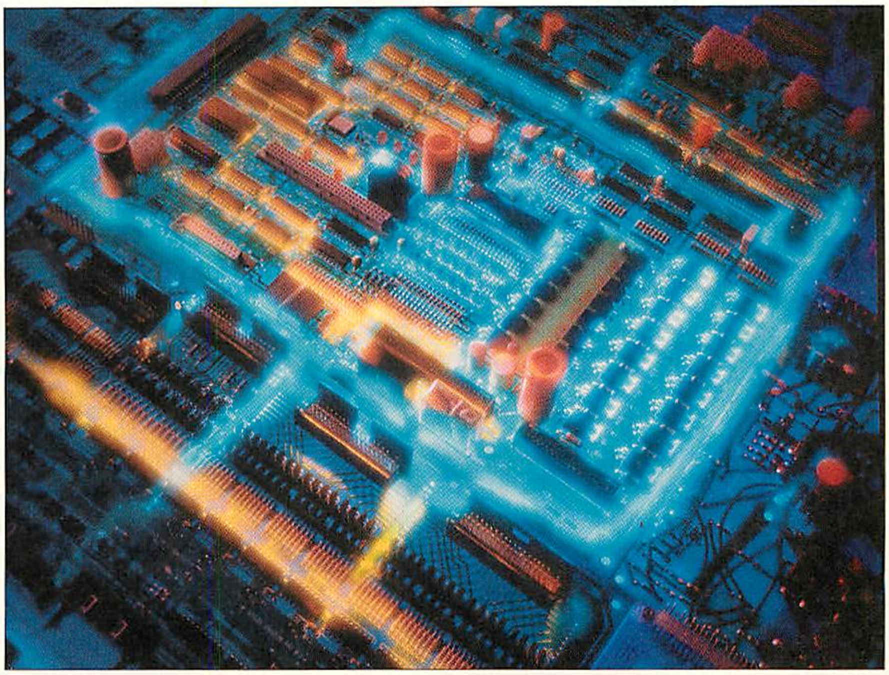
Future ARMs and VIDCs

In the next 18 months, the Risc PC will be subject to great improvements on its powerful but limited video subsystem. The VIDC20 will be around for a while but ones which can be clocked through the roof will appear before a replacement arrives. Until then, there will be nothing more than 2Mb of VRAM on the Acorn platform, unless someone conjures up a DEBI card in the same vein as the colour card but phenomenally powerful. It is doubtful anyone in the Acorn market would put up the pennies for someone to develop such an upgrade card as the costs would be high and the market small. Future ARMs will yield more immediate advantages to graphics users, maybe not in display specifications, but for co-processing, multi-processing, direct drive printing and imagesetting, the increased MIPs will be of huge benefit to the graphics user.

The first improvement to come will be the ARM700 and ARM800 units, which will be between two and six times more powerful than ARM600s respectively. They will hopefully be equipped with floating point units to deal with mathematically intensive graphics tasks. Further down the line we will see asynchronous ARMs which would double or triple real-world performance again.

Finally, or maybe it will be a new beginning, StrongARM technology will worm its way into the silicon powering our Acorns. Acorn's technology swap with megahertz masters Digital will eventually result in ARMs running at 300MHz and Alpha chips requiring substantially less electricity than would be required to supply a small country.

The future is looking up, but it definitely rests in the hands of software houses to realise the potential of the Acorn platform – if it is to ever stand at the cutting edge of computer graphics it must also offer an economical alternative to the graphics workstation for the lower-end user as well. AU



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I am writing these notes on a beautiful day in early March and hoping, as usual, that I'll manage to catch the magazine deadline! I hope you all appreciate the time I am spending stuck in the office on such a day, just so that you can find out about SENLAC's excellent prices!

Seriously though, check out our music bundles this month and, of course, our permanently low prices on Acorn computers and associated peripherals.

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Pete Sykes

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REVIEW

Share and share alike

Brian Shaw examines two packages that might just help you make a killing on the stock exchange.

Computers are ideal tools for compiling details of your dealings on the stock market, and can take the drudgery out of keeping track of your portfolio. There are two main packages for storing, updating and analysing a share portfolio, namely *Shares 3* from Apricote Studios and *ShareHolder Professional* from Silicon Vision.

Shares 3

This is the lower-end package of the two, costing just £39.95 including VAT. It's supposedly aimed at the occasional user but is actually quite sophisticated while being very simple, if a little time-consuming to use. It requires very little knowledge of the intricacies of share transactions and the user manual is clear and easy to follow. It works happily on RISC OS 2 or 3 with a single disc drive and only 1Mb of memory.

The disc supplied can hold up to 60 companies or indices in each single portfolio, but there is no limit to the number of portfolios (if users require a higher individual portfolio content they can write to Apricote for an upgrade stating their requirements). Within each portfolio it is possible to use the RPI, FTSE 100, or any other index as a company, so that graphical ratios can be displayed to compare the price performance of any individual share with the relevant index.

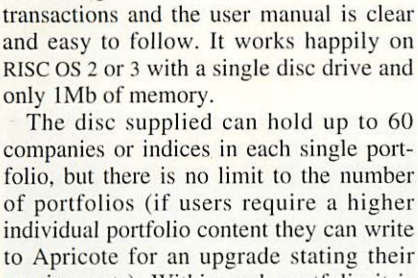
Entering data is easy and allows for purchases and sales with specific allowance for expenses, and the package has in-built methods for dealing with partly paid purchases and bonuses (particularly useful for privatisation issues).

There are many useful features for different ways of viewing and analysing data for both individual companies, groups of companies or for a portfolio in total, as follows:

- The package can list transactions for any spread of dates.
- You can create a summary of the whole portfolio to show holdings, current values, costs, profits/losses, and dividends, with totals for a group of shares or the whole portfolio.
- For any share you can show a display of high/low and current price over a specified period, together with total cost, profit/loss and total dividends.
- Also, any share price can be displayed on a graph, along with a graph of a similar amount when invested in a deposit account with user-defined rates of interest, the historic low price and the 100-day moving average (although the number of days used is also user variable).
- Graph ratios can also be displayed to compare the price movements of any two shares or any share against an index. This particular graph has a Shares Predictor window but don't think this will make your fortune – it's really a bit of fun and predicts future values using past history, and obviously can't tell the future that accurately.

Shares 3 also contains a relatively sophisticated method of calculating the growth in value of any share which takes into account changes in the share price, dividends, purchases and sales, and expresses the result as a compound rate of growth.

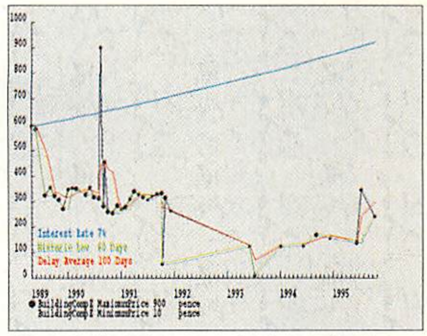
Typing in prices can be somewhat laborious for a large portfolio, but this can be overcome if you have a teletext card which enables the bulk update of prices by dragging teletext pages into the package.



Shares Professional shows share prices in three-dimensional ribbon graphs.

Page	Invested	Value	Gain Of
Acorn;Acorn Comp	841.80	3684.00	2842.20
Barclay;Barclays	2042.41	6350.40	4307.99
Boots	73940.66	65700.00	-8240.66
Br Pet;BP	677.31	1147.12	469.82
Cadbury;Cadbury Schw	1215.90	10034.20	8818.30
Fisons	-4209.00	6480.00	10689.00
GEC	1061.60	8480.00	7418.40
Guinnes;Guinness	8297.35	20335.20	12037.85
ICI	2200.58	9121.33	6920.75
IMI	920.00	4518.00	3598.00
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LloyBnk;Lloyds Bank	1131.59	9201.50	8069.91
M&S;Marks&Sp	1026.33	11016.00	9989.67
Moulem	4630.76	1162.50	-3468.26
PruCorp;Prudential	-9593.40	4010.00	13603.40
Ryl Ins;Royal Ins	1392.74	1852.80	460.06
Shell	1159.07	16930.00	15770.93
Trafalg	887.50	911.25	23.75
Unilevr;Unilever	976.69	16660.00	15683.31
Portfolio Total Value		204121.69	118419.72

Share Professional showing details of your portfolio.



Shares 3 displaying a graph, along with the performance of a similar investment in a deposit account.

For the price this is a very useful package for someone who deals relatively infrequently in shares, and it's a great way of holding purchases, sales and dividends information for easing the process of income and capital gains tax returns.

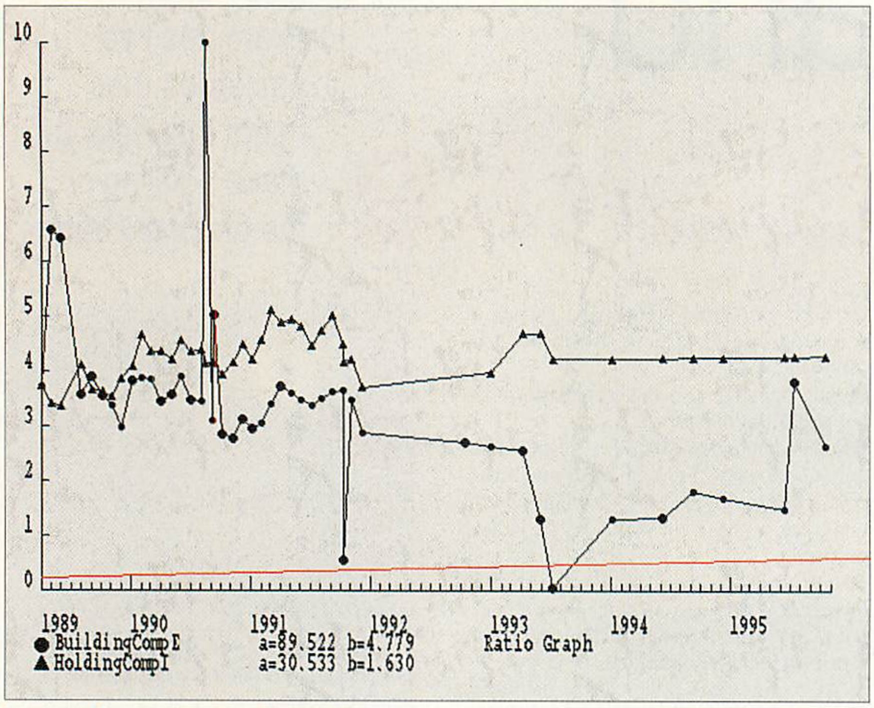
ShareHolder Professional

ShareHolder Professional is aimed at the more sophisticated investor and has a RRP of £125 plus VAT. As with *Shares 3*, *ShareHolder* is easy to use, with manual share price updates probably being a little quicker to accomplish than *Shares 3*. It is also compatible with all versions of RISC OS and supports interactive help. The manual is clear and straightforward to follow and assumes relatively little knowledge of financial investment.

The number of companies per portfolio and indeed the number of portfolios is only limited by the amount of memory available. The program has both a calculator and a calendar function built into it which are accessible from menus. This is quite handy since calculations are occasionally required when entering data, although the program automatically makes the most necessary calculations. The calendar is also an input for the RPI index which is then held as such within the system, and is plotted on all share price comparison graphs without the RPI needing to be held as a 'share' within a portfolio.

The pages are clear and colourful and data entry is relatively easy, although when inputting dividends it is necessary to delete a number of dashes on each occasion when a date is to be entered. It is, however, not necessary to input both

REVIEW



Graphs in *Shares 3* are clear and concise.

net dividend and tax credit since the program holds a tax rate which can be altered for each individual financial year (6th April to 5th April) and hence the input of a net dividend automatically generates both the gross dividend and the tax credit. Dividends are shown also as financial year totals.

Each company is designated by a name and a separate alias, with the program assigning a page number, and sorts and listings can be done under any of these parameters within each portfolio. The alias name must be entered in the correct format if automatic bulk updating of share prices is to be used (from teletext, for example) and it is this alias which identifies the labels. If updating from teletext is not to be used then the alias name can be ignored.

The displays of transactions, prices and dividends for each individual share are not shown complete, but are displayed in boxes with forward and back arrows to enable the movement between dates.

The package does not have any specific methods of dealing with partly paids and bonuses; the user merely enters second and third tranches of payments as zero shares purchased with a cost, or bonus shares as shares bought at zero cost.

It is possible to analyse for any portfolio, but not for a group of shares within a portfolio, a summary of data showing holdings, current values, profits/losses and dividends with totals for the portfolio.

The graphics of this package are excellent, with graphs displayed as coloured ribbons in a three-dimensional display rather than two-dimensional line graphs. Plots of the share price history, the share price trend (calculated from the historic prices), the RPI and the 'market' prices are automatically generated in a page history graph. It is not, however, possible to graph one share against another, nor to compare a share price with an investment at a compound rate of growth, as in a building society investment.

Also available is a page forecast which attempts to forecast the next price from the previous share values. This display shows the high, low, average and latest share prices for the page, and also shows the amount and percentage decrease of the current price from the high price. No explanation or formulae are given as to how the forecast price is calculated and I feel this should be treated with great care, since it can obviously take no account of future economic or market conditions. There is no graphical display of share growth allowing for changes in share price together with dividends, purchases and sales.

Manual bulk updating of prices within a portfolio is made easy by an 'edit price history' page for the whole portfolio. This enables the user to move one by one through a price update list rather than having to update each share history page individually. For any designated financial year, a dividend list is available showing all received dividends within a portfolio.

ShareHolder Professional is able to automatically bulk update the prices of all shares held by importing files from teletext or Prestel, and so on. You simply need to drag a viewdata text file onto any of the display windows. This is when the alias name of a share is used since it is that name which is matched to the names in the imported files. The date stamp of the imported file is automatically entered as the share price date for each entry.

Conclusions

Both packages are easy to use and with teletext cards can import files for bulk update of prices. The page displays of *ShareHolder* are visually more appealing, but I personally prefer the concept of the *Shares 3* graphs where it is possible to plot two shares against each other and also to graph a similar investment at a compound rate of interest, as in a building society or deposit account. *ShareHolder Professional* does, however, have the automatic graphing of the RPI with each share graph.

Neither package is going to make you your fortune (at these prices what do you expect). However, as packages for the storing, retrieval and analysis of your investments, both are excellent and will also probably help to impose a discipline on investors of keeping their portfolios and share prices up to date, while easing the burden of finding and sorting masses of paperwork to complete the annual tax returns. AU



Using Ceefax on a teletext card to download share prices.

Product details

Product: Shares 3
Supplier: Apricote Studios
Tel/Fax: (01354) 680432
Price: £39. 95 inc VAT
Pros: Easy to use • Good for comparisons • Low price
Cons: Visually unexciting

Product: ShareHolder Professional
Supplier: Silicon Vision
Tel: 0181-861 2173
Fax: 0181-427 5169
Price: £125 + VAT
Pros: Visually excellent • Useful features
Cons: Flexibility • Price

HOW TO ORDER: Order by telephone quoting your credit card number. Order by post, cheques payable to "Technology Matrix".

EDUCATION ORDERS: Education orders are welcome. Please post or fax your official order for immediate attention.

TERMS: All prices exclude V.A.T. & carriage. Prices & specifications may change without notice. E. & O. E.

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ONE STOP STORAGE

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120MB 15MS IDE	119
170MB 15MS IDE	145
250MB 15MS IDE	189
340MB 15MS IDE	239

The above Drives are complete with all fittings

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250MB IDE Drive	125
340MB IDE Drive	135
420MB IDE Drive	139
SCSI	
250MB SCSI Drive	139
340MB SCSI Drive	159
540MB SCSI Drive	179
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2.0GB SCSI Drive	1169
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Denton SyQuest drives provide you with the ultimate hard disk storage - without imprisoning your data on a hard disk! Whenever you run out of storage space, simply eject the cartridge you've just filled up, and insert an empty one. It's that simple! Whatever your storage needs - transporting documents, archiving your files, or just keeping a copy of your data off-site for security reasons - Denton Removable SyQuest drives are the answer!

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_88MB 5.25" media	189
200MB 5.25" media	289
270MB 3.50" media	259
SCSI (external)	
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200MB 5.25" media	399
270MB 3.50" media	329
IDE (internal) A5000/RISC	
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_88MB 5.25"	49
200MB 5.25"	65
105MB 3.50"	43
270MB 3.50"	49

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1.0 GB Tape drive	795
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Supplied with cables, tape and software



Optical Drives

Fujitsu	
230MB internal	429
230MB external	499
Sony	
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650MB external	call
1.3GB internal	1339
1.3GB external	1399
Cartridges	
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650MB cartridge	69
1.3GB cartridge	99

CD-ROM Drives

DENTON

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6 Drive Tower (2.4)	1095
6 Drive Tower (Quad)	1695
Cumana Oscar	209

Dual speed, connects to printer port on A3010/3020

Cumana Bravo	249

Dual speed, available with printer port connection or SLCD interface on A3/5000

Cumana Indigo

The ideal CD-ROM for the RISC-PC. The 300ia includes an audio mixer and Artisan 2 CD.

300i IDE interface	209
300ia IDE interface	249

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A3000/3010 series	69
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A3/4/5000 16 bit	85
RISC PC 16 bit	85
RISC PC 32 bit	169
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Colour card gold	239
Chroma 500 Genlock	419
Chroma 150 PAL	169
Chroma Genlock card	209
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Eagle M2	319
Vision colour Digiti.	99
HiVision colour Digiti.	149
Scanlight video 256	199

Printers

Canon	
BJ-10sx	153
BJ-200	197
BJ-230	279
BJ-600 colour	379
BJC-4000 colour	299
Hewlett Packard	
HP320 portable	195
HP520 mono **(NEW)**	229
HP500 colour	
HP560 colour **(NEW)**	375
HP 4L (300dpi)	449
HP 4P (600dpi)	659

CALL FOR PRINTERS NOT LISTED

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Acorn	
AKF52 14" Multiscsn	249
AKF50 14" Hi. Res.	305
AKF60 14" Multiscan	315
AKF85 17" Multiscan	939
Sony	
CPD-15SF1 15" Trinitron (Fantastic)	349
IDEK	
Vision Master 17" (Brilliant)	549
Denton	
14" SVGA colour .28 pitch (good value)	169

Accessories

50/50 way SCSI cable	15
25/50 way SCSI cable	15
SCSI 2 cable	25
SCSI terminator	15
2nd IDE drive fit. kit	10
External drive case	69

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A3000 1-2Mb	54
A3000 2-4Mb	89
A3000 1-4Mb	128
A3010 1-2Mb	44
A3010 2-4Mb	104
A3010 1-4Mb	144
A3020/A4000 2-4Mb	88
A5000 2-4Mb	88
A5000 8Mb	258
A300/A400 8Mb	248
RISC PC 4Mb	129
RISC PC 8Mb	239

STAR BUY

420MB IDE DRIVE £139

STAR BUY

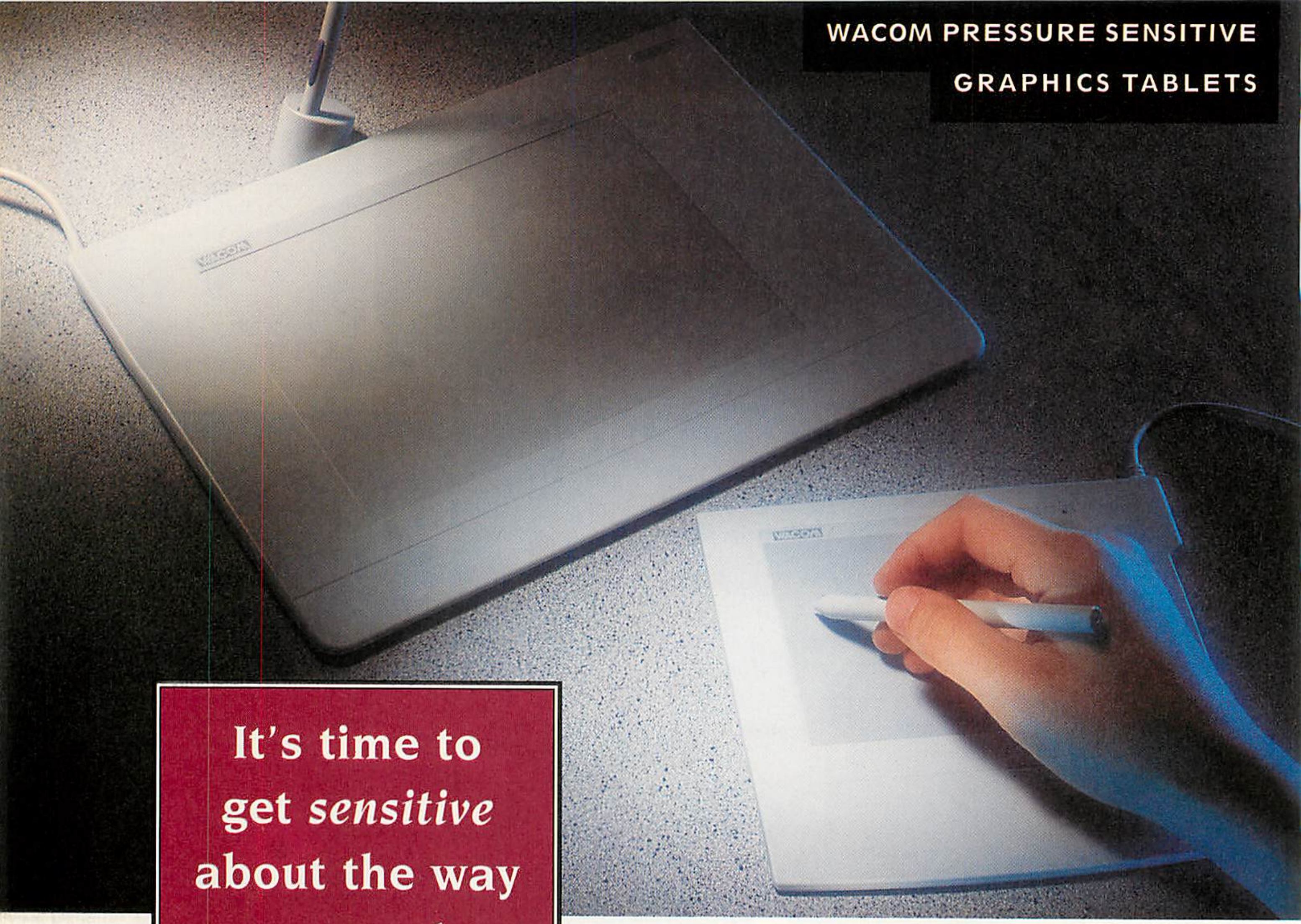
Computers



RISC PC 600	
2/210 AKF60 14"	1155
2/210 AKF85 17"	1525
5/210 AKF60 14"	1289
5/210 AKF85 17"	1665
9/420 AKF60 14"	1569
9/420 AKF85 17"	1939
A3010 Action Pack (No Monitor)	
FD system	245
_80MB HD system	359
120MB HD system	415
A3010 Learning Curve (No Monitor)	
FD system	319
_80MB HD system	429
120MB HD system	439
A3010 Early Years (No Monitor)	
FD system	329
_80MB HD system	439
120MB HD system	449
A3020 (AKF52 14")	
FD system	689
_80MB HD system	799
120MB HD system	809
A4000 (AKF52 14")	
210MB HD system	849

CALL FOR PRODUCTS NOT LISTED

WACOM PRESSURE SENSITIVE GRAPHICS TABLETS



It's time to get *sensitive* about the way you *create* your graphics

....

Many computer users feel that a graphics tablet is more natural to use than a mouse and without doubt it gives a much faster, smoother and higher resolution response. The mouse remains functional and can be used at the same time as the pen — however the pen has such a natural and precise feel, you will probably prefer it for many operations such as moving windows, drag and drop, region selection etc.

The new (approximately A6) ArtPad tablet offers a superb specification, even by Wacom standards; resolution exceeding 2000 dpi, 200 samples per second and 256 levels of pressure. All Wacom tablets include a cordless pen for added ease of use and flexibility.

The tablets are pressure sensitive, so in combination with suitable applications they can produce realistic effects such as variable width (the Eesox ArtWorks pressure sensitive tool) or variable density airbrush painting (PhotoDesk). The Computer Concept's drivers will be compatible with these and other software that can take advantage of the pressure information, such as Studio 24 and DA Picture.

Computer Concepts can supply the tablets with either Photodesk or the Eesox Pressure Tool at special prices. **PHOTODESK** is a photo retouching package from Spacetech, which offers a wide range of advanced image manipulation features; for example an airbrush, paintbrush and magic wand, full 24 bit colour support, the use of virtual memory, OLE with Impression, complete undo, effects such as colouring, toning and masking, motion blurring, cloning and smudge and smear.

The package contains the Wacom tablet (A6 ArtPad, A5 or A4) and manual, a cordless pen, Computer Concepts driver software suitable for all models of Acorn RISC computer (A3000 must have serial port upgrade) and PC drivers. Requires 1Mbyte or more.

Price: A6 ArtPad & drivers: £169 + VAT (£198.57 incl.) A5 tablet & drivers: £399 + VAT (£468.82 incl.)
A4 tablet & drivers: £549 + VAT (£645.07 incl.)

ArtWorks Pressure Tool with tablet: add £10 + VAT (£11.75 incl.)
PhotoDesk with tablet: add £125 + VAT (£146.87 incl.)

ArtWorks Pressure Tool: £39 + VAT (£45.82 incl.) PhotoDesk: £169 + VAT (£198.57 incl.)

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Indigo information

Clem Vogler takes the lid off his Risc PC and slips in an Indigo CD-ROM drive from Cumana.

Risc PC owners who have been staring wistfully at the blanking plate where their CD-ROM drive should be need pine no longer. Acorn has announced that the 5Mb and 9Mb models will henceforth be available with integrated CD-ROM drive at £199 + VAT on top of the standard Risc PC price.

The drive supplied is Cumana's CAA300i Indigo, so called because of the ease with which the little blighter can be inserted in the waiting Risc PC slot; 'open the computer and "in-it-goes"' (I'm not making this up). There is another version of the drive called CAA300ia available from Cumana, but not offered by Acorn. This version has audio mixing facilities so you can combine audio output of the drive and the computer. I would have thought that offered interesting possibilities for multimedia enthusiasts.

I can report that there's nothing particularly difficult about installing the drive. You have to cut out the blanking plate with a sharp knife, install the IDE interface supplied and swap a few cables. Full instructions are included. A problem, which only arises with the 300ia version, is that early Risc PCs were made without the motherboard connector (LK14) to which the audio mixing interface has to be attached. Acorn, through its service agent Granada Microcare, will swap the motherboard where this connector is absent. The cynical might wonder if this explains why the audio mixing version is not available under the upgrade offer.

What you get

The two versions have a similar specification. They are double-speed IDE drives with 64K cache and are Photo CD and Acorn Replay compatible. They use motorised drawer loading and have an eject button and a volume-adjustable earphone jack on the front. The back has the necessary connectors and ID jumper pins in case you want to address multiple drives.

CD-ROM driver software is provided which installs CDFS, an additional filing system with its own set of * commands. Naturally it is a read-only filing system which can identify and correctly read the various types of compact disc: standard data, CD audio and Photo CD. For full track control when playing audio CDs, a *CDPlayer* software interface provides search and play features. *ChangeFSI* image processing software is also included (yet again) as is Acorn's *PhotoView* software which allows you to view and manipulate images on a Photo CD disc.

IDE is not the only interface for CD-ROM connection, but it offers the convenience of housing the drive internally, leaving the expansion sockets free for other devices – and we know how quickly those sockets fill up. For older machine owners – or Risc PC owners preferring an alternative interface – there is a choice of expansion card, parallel port connection (bi-directional ports only) and SCSI. Cumana supplies versions for each of these.

If you run DOS on your machine, either with an expansion card or using the PC Emulator (version 1.86 or higher), you will be able to access the CD-ROM drive as a DOS drive (e.g. as drive F:). You will need a CD-ROM driver for DOS which is likely to have been provided with your DOS installation.

The CD player looks and feels right in the hitherto vacant slot, though purists might object that Cumana's pale cream finish is at variance with Acorn's tasteful grey. For those more concerned with function than appearance, there is no cause for disappointment. CD-ROM, though slow, has awe-inspiring memory capacity. The Photo CD images are stunning on Acorn's superb AKF85 monitor and the audio CD quality sound will be excellent with the ESP 16-bit mini audio card with MIDI output. A Risc PC without CD-ROM is Torvill without Dean. Don't hesitate! AU



Accessing Photo CD is easy with the Indigo drive and Acorn's *PhotoView* thumbnail previewer.

Product details

Product: Indigo CD-ROM drive for Risc PC
Supplier: Cumana
Tel: (01483) 451371
Fax: (01483) 451371
Price: CAA300i £249 + VAT, CAA300ia £299 + VAT. Other drives, other interfaces and various bundled software offers: p.o.a. from Cumana.

Pros: Easy fitting to Risc PC • Does not take up a DEBI expansion slot • Good basic CD-ROM drive
Cons: Takes up the second IDE slot • Risc PC only

An electronic library

Geoff Preston looks at a range of mini CD-ROMs called Electronic Books.

Electronic Books are 8cm CD-ROMs originally developed for the Sony Data Discman, but now Cumana is marketing them along with a program called *PaperOut* which will enable them to run on an Acorn computer. The discs will fit in the 8cm recess now present in most drives which have a drawer. If your drive uses a caddy, you'll first need to fit the disc inside an adaptor ring to enable the 8cm disc to be played in a drive intended for 'standard' 12cm discs. Because of the need for an adaptor, these discs are not recommended for auto-change disc drives.

The first feature of these discs that one notices is the cost; the cheapest title is under £30. Before you can use it on your Acorn you'll need to buy *PaperOut*, so you could argue that the first disc you buy is no cheaper than a standard CD-ROM. However, once you have *PaperOut*, subsequent mini-disc purchases will work out much cheaper.

It must be admitted that the graphics are basic, to say the very least. But in fairness, these CD-ROMs were designed for a portable disc player with a small liquid crystal display. For the purpose for which they were originally designed, there's probably none better, but if you're used to ultra-high resolution 24-bit colour images, you're going to be disappointed with these. However, they are adequate as the diagrams and charts do their job and the spin-off is that the simpler graphics are delivered faster. I feel these discs are really text providers and as such, they are excellent because they're clear and easy to read.

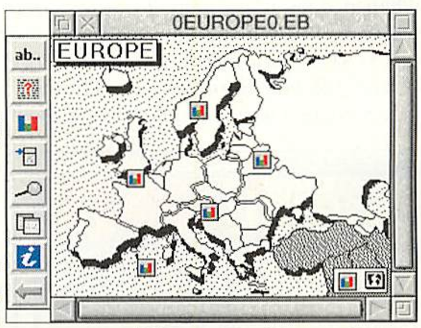
As one might expect from Sony, there is high quality sound on most discs, usually in the form of digitised speech. The people whose speech has been digitised appear to have, in the main, originated from the other side of the Atlantic. You may or may not consider that a disadvantage.

At the time of writing, networking with these discs is possible, but not yet legal as the necessary agreements had not been finalised. By the time you read this, it is more than likely the licensing agreements will have been settled. These are excellent resources to push around the network because there are no large graphics or replay files to slow things down.

Of the dozen or so titles marketed by Cumana, these are my recommendations:

Chambers Science and Technology Library (£39.99) As a former CDT teacher, this one is of particular interest. It's divided into four sections; Science and Technology dictionary, Great Inventions through History, Great Modern Inventions and Great Scientific Discoveries. Students at my school will very soon be using this disc to research their science work.

Collins Electronic Food File (£29.99) This will be of enormous use in Home Economics departments. It lists countless foods with their calorific values and nutrients, an encyclopaedia of food additives and guides to freezing and microwaving food. In my opinion this disc is easily the best value for money.



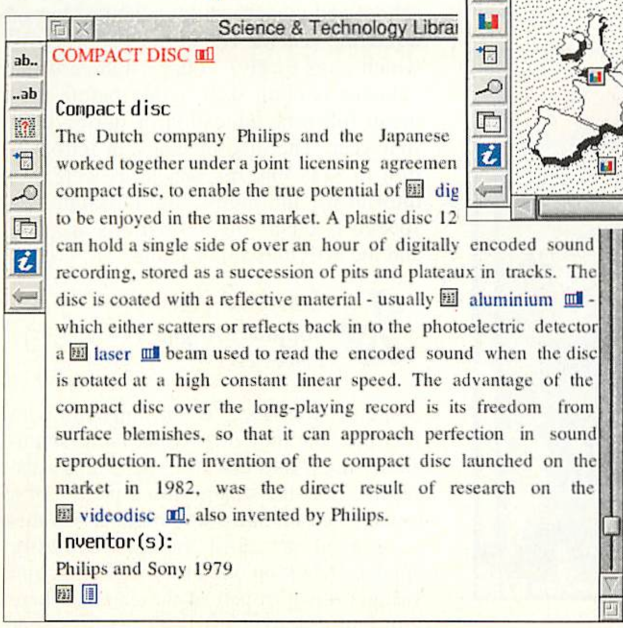
Graphics are adequate and include hyperlinks.

Earth Guide: an Environmental Handbook (£39.99) This disc contains information about everything environmental. The text is supplemented by a great number of maps, graphs and charts. Geography, Science and Social Studies teachers should take a look at this disc.

Oxford Dictionary and Thesaurus (£29.99) This is the same price as *WordWorks* by Computer Concepts, although the dictionary is larger and often has longer definitions. The fact that text can be selected and saved means dictionary entries can be copied across into a DTP document.

Conclusion

Apart from the cost, the one thing that immediately struck me was the consistency. Every disc had the same 'feel' to it. The layout, icons, abbreviations and menus were identical throughout. It's a pity I can't say the same about conventional CD-ROMs. If you can cope with the poor graphics, these represent excellent value for general-purpose research. If a school has a network and £2000 kicking around, a six-up CD-ROM drive tower filled with mini CD-ROMs would make an excellent resource for a library or Learning Resource Centre. AU



Hyperlinks are plentiful allowing for easy cross-referencing.

Product details

Product: PaperOut
Price: £49.95 + VAT
Electronic Books:
Price: £29.99 + VAT
Supplier: Cumana
Tel: (01483) 503121
Fax: (01483) 451371

Pros: Excellent value • Enormous library of titles • Consistent interface
Cons: Limited graphics • Not suitable for all drives



Round and round we go

Geoff Preston looks at the latest CD-ROM releases.

Since my last look at new CD-ROMs, there have been some significant releases. I would like to think that all school children will have access to this material, but I feel this may still be some-time away, even though I am assured that a great many more CD-ROM drives have appeared in schools, especially in primary and middle schools.

NCET has announced a further £3 million for CDs in primary schools. If anyone is unsure about software to buy, there should be something here. Without any further ado this is my top ten, although not necessarily in any particular order.

Kingfisher Micropedia

Supplier: ESP
Price: £90 + VAT

Until now, the only CD-ROM based encyclopaedia for Acorn has been *Hutchinsons*, which is fine for older students but not really practical for the young ones. ESP has recently launched the *Kingfisher Micropedia* which is aimed at Key Stage 2 and lower Key Stage 3. I wouldn't recommend this for secondary schools as it will probably be too young for the majority of students, but for primary and middle schools it is an excellent resource which should be placed on the school network.

The text is clear with an easy style, the pictures are prolific and the search facilities are sufficiently powerful without being over-complicated. The material is divided into categories which can help the user select the required record. As a general reference work for KS2, there are no rivals.

Environment CD ROMs

Supplier: Academy
Price: £35 + VAT

There are currently three CDs in this series. Each is taken from the *Environment 2: Land and Air* CD-ROM which costs £99. The discs represent good value for money and in one sense the three separate discs are a better buy than the single disc because you also get booklets of worksheets.

Robbie Burns

Supplier: CSH
Price: £79.95 + VAT

I always think that people who don't say very much make a much bigger impression when they do speak. CSH doesn't produce a great deal of software, but when it does it's a gem. *Frontier 2000* was hailed as a major advance in the use of CD-ROM as a learning medium. *The World of Robbie Burns* goes even further.

It contains a wealth of information about the life of The Bard, not just his poems but his day-to-day life, where he lived, worked, and the people he met. There are over 500 digitised images, some of which are original Burns documents (ink blots included) and a massive 32,000 word text to search out. The disc also uses MPEG full screen video clips for when an MPEG card is released. It is no accident that this disc has been released for the Robbie Burns Bi-Centenary (death) in 1996.

The clever part about this program is the way it is launched. You begin by loading the CD-ROM in the usual way and it installs the Robbie Burns icon on the icon bar. To continue, you must drag a text file onto the icon. The text file effectively determines the user's 'route' through the material and can be tailored to suit a particular age group or topic. I'd like to see this approach adopted elsewhere. This really is an innovative product which will receive a full review as soon as I can get it into a classroom. I'm not a betting man, but if I were, I'd put few bob on this product picking up some awards.

En Route

Supplier: Nelson Multimedia
Price: £99 + VAT

This is not so much a French program, but a complete tutorial for beginners through to the more advanced student. The course is divided into sections, each carefully graded and with an accompanying test which may be set against the clock or as a revision aid. The questions are not the usual multiple choice textual ones, but have a variety of formats which add to the overall appeal.

Max and the Machines

Supplier: Nelson Multimedia
Price: £70

This CD-ROM is aimed specifically at pre-school and nursery children and is part of a reading scheme called the Flying Boot, which aims to give young children some valuable reading skills either before they begin full-time education or during their first year. The disc includes an introduction to Max and his mates, as well as a tutorial for the mouse and desktop. The speech is clear, the animations are fun, and the activities are brilliant.

Garden Wildlife

Supplier: Anglia TV
Price: TBA

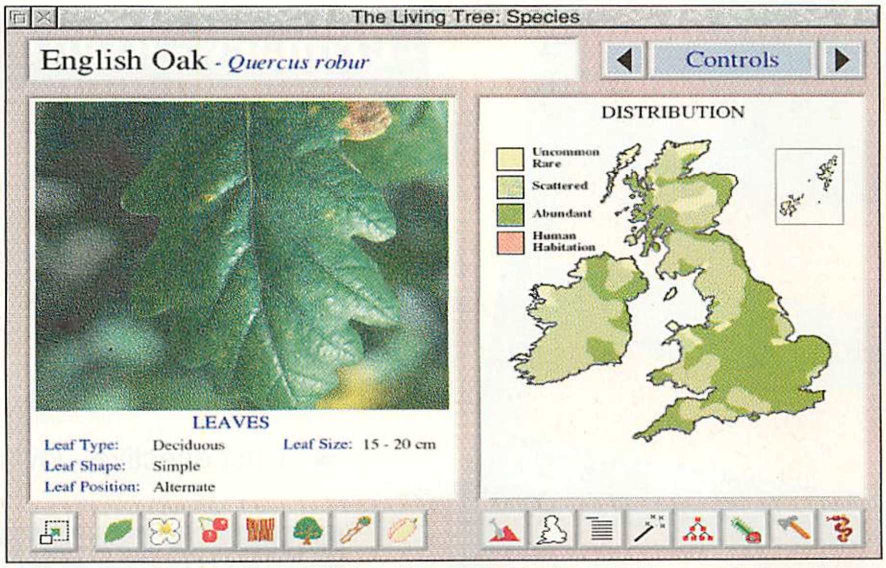
Some of Anglia's CDs will only run with Key Plus but they do produce some stand-alone discs, like this one. After the usual credits, this disc opens with a picture of a town. Click on one of the buttons – in this case garden – and another drawing appears. Click on one of these buttons and you get down to part of the garden where you can discover all the creatures that



En Route provides an excellent start to learning French.

inhabit that particular environment. Once you have searched out the required information, it is presented in a clear style with good quality illustrations. There is an excellent implementation of a traditional layout and one which will be invaluable to Key Stage 2 studies.

Although the price has yet to be decided, one thing is certain – it will be good value for money.



Main Multimedia's *Trees of Britain*, sold through HMC, provides an excellent resource for wood-lovers.

Industrial Revolution

Supplier: Anglia TV
Price: TBA

This is another stand-alone disc from Anglia, and like *Garden Wildlife* it's very easy to use. I feel I could give this program to anyone who knows how to use a mouse and let them get on with it. That is my benchmark for a really good CD-ROM and this disc passes easily.

The disc is divided into four sections; Transport, Agriculture, Industry and Social Conditions. Once into the required section, you're presented with Lessons, Case Studies and Facts and Figures. The use of pictures (both photos and drawings) with text is well balanced and overall a very pleasing layout. A year ago, resources for Key Stage 3 History were a little thin on the ground. Times have certainly changed.

PictureBase: The Era of the Second World War

Supplier: AVP
Price: £199 (inc full site licence)

I must say, I don't care for the title of these discs because to me it implies they are just discs full of photos which couldn't be further from the truth. Although photos are a prominent feature, each picture is displayed with some carefully worded text which the user can have read out. This makes these discs especially good for children with learning difficulties.

WW2 is a very popular CD-ROM topic at present, mainly because it now features in the NC and previously there wasn't much material available. One small (very small) criticism – I don't feel the *PictureBase* discs are quite as easy to start up and use as some. While many discs use the 'click-button' approach, using *PictureBase* discs is more like searching a database. Not that I've got anything against that, it's just that if you're not used to the particular style of the database it can take longer to get going.

Trees of Britain

Supplier: Hampshire Microtechnology Centre
Price: TBA

This review is based on a pre-release version as the final product had not gone to press at time of writing.

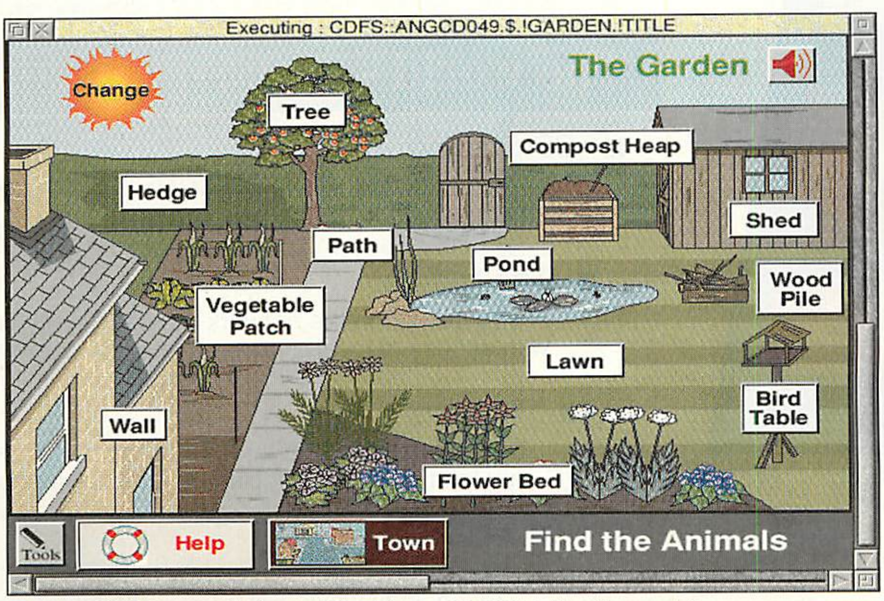
I've been looking forward to seeing this for a long time and it was well worth the wait. As a former CDT teacher with a particular love for working with wood, I found *Trees* fascinating. Its four sections cover everything related to trees including identification, uses and planting. The main part of the disc is the catalogue which lists over 120 native trees.

There is no search facility, instead the user may scroll up and down the list or click on one of the letters of the alphabet at the bottom of the window. Once the name of the tree of your choice is visible, click on it and up comes a window which includes information about the leaves, and the distribution. Other information available includes the bark, fruit, traditional and modern uses and medicinal uses. A glossary is also included, as is a planting guide.

Usborne Exploring Science

Supplier: Hampshire Microtechnology Centre
Price: TBA

Last year I reviewed *Exploring Nature* and declared that, in my opinion, it was about the best primary school CD-ROM available. Now, using the same format, Usborne Exploring Science promises to bring science to life for KS1 and KS2 students. AU



Garden Wildlife from Anglia is a traditional format CD-ROM, brilliantly executed.

Contact details

Nelson Multimedia	Tel: (01932) 262274
AVP	Tel: (01291) 625439 Fax: (01291) 629671
ESP	Tel: (01945) 63441
CSH	Tel: (01480) 467945
Anglia TV	Tel: 0181-778 7536
Hampshire Microtechnology Centre	Tel: (01705) 378266

Making records

Colton Software has just released the database part of its Fireworkz integrated package. Clem Vogler looks at the package, Recordz, and sees how well it integrates.

Software integration is a highly desirable quality. From your database you may want to pluck an address to insert into your route finder, load dimensions for a virtual reality office design, generate business graphics from accounts figures and address invoices. Then you would e-mail your secretary for coffee while the scheduler autodials that important reservation at the golf club and marks you *unavailable* in the corporate diary.

There are two ways to approach this office management nirvana. You could buy separate accounts, database, word processing, spreadsheet and business graphics software and link them yourself, making use of loader modules supplied with the packages and protocol features like hot-linking and OLE provided by the software or supported by the operating system. Alternatively, you could use an integrated software suite from a single supplier.

Using a cocktail of separate packages enables you to choose *best of breed* software from the range available. The problem is that making them talk to one another is down to you, though this is becoming easier as software houses supply the links and standardisation to make it work. The off-the-peg integrated suite comes with the reassurance that the various modules will communicate optimally, but you can no longer mix and match – the suite is put together for you to take or leave.

The main integrated suites for RISC OS machines have been Minerva's budget priced, low-spec *Desktop Office* and Acorn's *Advance* – a suite of separate applications with some Acorn-inspired links added on. Now, Colton has released *Recordz*, the database manager to accompany *Wordz* and *Resultz*, its existing wordprocessor and spreadsheet. The three form an integrated unit marketed as *Fireworkz Pro*.

Iota's database engine

To save on development work, Colton has adopted the respected Iota *DataPower* database engine and provided a new front-end designed to integrate with the other *Fireworkz* components. Unlike early database managers, which were playthings for omniscient gods with foreknowledge of what client records they would need to hold next year, Iota's engine is adapted for mere mortals and offers total flexibility about database, record and field sizes and freedom to vary the number and types of field in an existing database. Data is compressed and each updated record is written directly to disc. This allows you to hold very large databases with the slight inconvenience that the saved state is updated whenever new data is written, so you can't return to the initial state if you decide to scrap in mid-session, unless you've kept a backup.

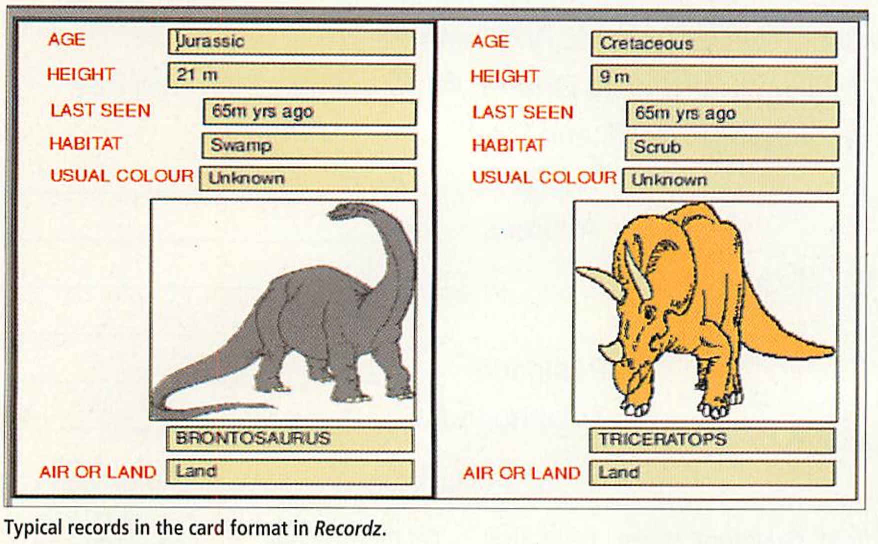
You would expect all this disc accessing to deliver a time penalty, but I found *Recordz* to be lightning-fast, especially on sorting, where it demolished an eight level sort through 1000 records in 14 seconds. This was slightly faster than *DataPower* (16 seconds) and a lot faster than various spreadsheets – including *Resultz* (which can only sort to a maximum of five levels). This is an interesting finding since it persuades purists who, recognising that a spreadsheet is just a different view of a database, might have demurred at supplementing a perfectly good spreadsheet program with a database manager to handle the same data.

Memory management has not been a strong feature of RISC OS. In contrast to the virtual memory handling under Unix, RISC OS databases greedily devour memory as file sizes increase, but are grudging in relinquishing it as records are deleted. All RISC OS large-scale-data-processing software has struggled with this limitation and *DataPower* (and thus *Recordz*) does relatively well with its variant of IBM's VSAM format for memory allocation and its preference for working from disc. *DataPower*'s engine was originally intended to drive a relational database manager (and may one day do so), but neither *DataPower* nor *Recordz* is anything other than flat file, with a single key field invisible to the user and no indexing except when sorting. This choice of architecture means the designers have opted for ease of use rather than maximum performance.

Spreadsheet appearance

The front-end appearance can be toggled between card index and spreadsheet layout. The former has a screen painter enabling field locations to be sized and positioned by mouse drags. *Fireworkz* has a powerful style editor, like *Impression*'s, whereby you can apply a collection of style features – highlight, colour, font type and size, line spacing, currency symbol – to a subset of data. Styles can be layered; use red for debtors and 14 point bold for family members, and family members who are debtors come up in red 14 point bold. The Style concept offers the slickest, most powerful approach to display editing and is ideally suited to the font and graphics handling strengths of RISC OS.

The user interface has been refined through successive implementations of the *Fireworkz* modules and is elegant, effective and uniform across the range. It is crammed with good features like video recorder browsing, context sensitive



Typical records in the card format in *Recordz*.

button bar and pointer, automatic column sizing, interactive help, dialogue boxes, choice of menu and key driven options, lots of screen view control – scale, autofit, split-screen, hide borders and so on. *Fireworkz* modules are intelligent at the print end too, especially the invaluable scale to fit page option that saves you from kicking the printer when it's 3am, and you don't want to mess around persuading the printer to stop leaving out half of the first line of your masterpiece

A satisfactory range of data types is allowed: text, number, date, real, boolean, file (sprite or *Draw*), formula and time interval. Value lists can be constructed of frequently used entries. Data validation is supported through declaring a field compulsory and through case or range restriction. Fields can also be hidden.

Import and export

There is no specific report generator, which must be accounted as a limitation, though the presumption is that you use *Wordz* or *Resultz* to set up a report format and import *Recordz* data. A couple of templates are supplied for common sizes of label pages. It is possible to modify these to fit other arrangements, though not as easily as with a dedicated label editor like that with Circle Software's *Impact Pro*. Queries are refillable and are handled by a menu-driven search dialogue so you don't need to remember any query commands.

The effect of a search action varies with the data type searched. For example, *is greater than* will find numbers larger than the target, dates later than the target, and text alphabetically beyond the target. Wildcards, logical operators and the ability to search in ascending or descending order on any or all fields allow elaborate criteria to be tested, with the resulting subsets added to an active queries list for later recall or further refinement. Searching is easy and powerful, and a match for *Squirrel*'s excellent flow diagram method, though users who operate client-server may regret the absence of structured query language.

CSV and *DataPower* files can be imported and exported. There is no provision for handling competitor file types like *Squirrel*'s, though *Fireworkz* documents – as opposed to the data files – can be saved as *Lotus.wk1* files and *Lotus* and *Excel* file types can be loaded. It is usually possible to reduce alien file types to a CSV common language and achieve your object via this extra step.

Resultz has been my preferred spreadsheet since it supplanted *Pipedream*. The arrival of *Recordz* yields an attractive integrated suite and users of the earlier modules will benefit from the more rational organisation of their data which this latest addition permits, particularly at the modest upgrade price. AU

Best use of memory

Benefits which integration confers are common look and feel, memory sharing and alternate views of the same data. The *Fireworkz* modules share a common skeleton of about 800K, which is allocated when *Fireworkz* is loaded. The various modules each monopolise a further couple of hundred K which they take up as they are called. Thereafter, memory is allocated in proportion to the amount of data present. Because *Resultz* and *Wordz* hold all their data in memory, there is a limit to the size of word-processing document or spreadsheet, set by the available free RAM.

Recordz, however, holds only the current record in memory, with the rest of the database held on disc. Recordz data therefore makes minimal demands on memory.

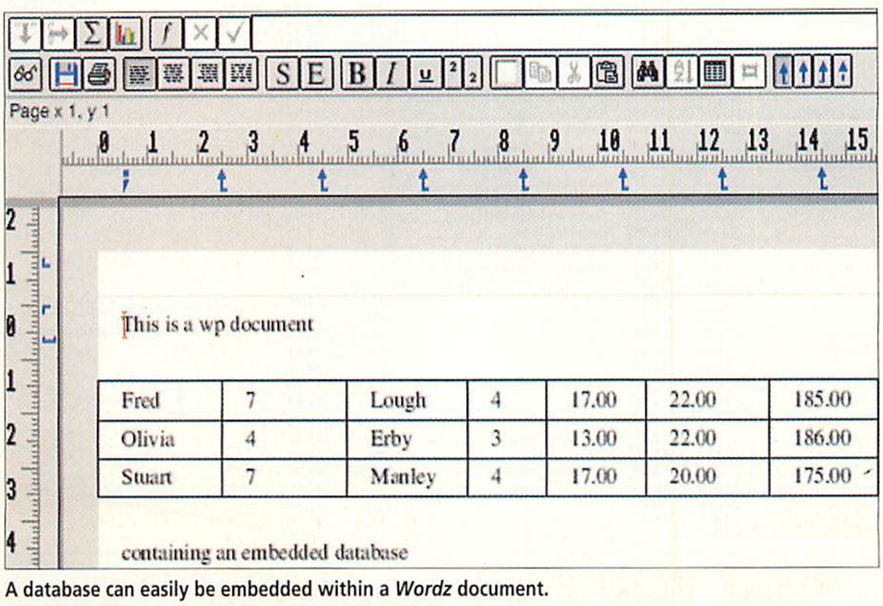
This functional distinction determines the optimum way of using *Fireworkz*, which is to treat *Recordz* as the repository for large volumes of data, while the other two modules reference this data as required. It is possible to cut and paste chunks of data from *Recordz* to the other modules, but this is not generally recommended as the data would then occupy memory and not update when changed in *Recordz*.

A second option is to drag a database (or subset) into a spreadsheet cell, whereupon you have the option to display all or some records. The third option is to use external referencing – a process with which existing *Resultz* users will be familiar, whereby the contents of a field in the database, or of a cell or range in a spreadsheet, are actively linked to a cell or range in another spreadsheet. Actively linked means that changes made to the source data are reflected in the linked cell as they are made.

A refinement introduced with *Recordz* enables you to operate with an array function on a chosen field and export the result. Suppose you had a database of car performance figures which included a field called top_speed. If you enter:

```
avg(?top_speed)
```

in a cell of a spreadsheet, it will return the average of all the values of top_speed in the current subset, and as the linkage is live, the value of the average will change appropriately whenever the data changes.



A database can easily be embedded within a *Wordz* document.

Product details

Product: Recordz, Fireworkz Pro.
Supplier: Colton Software
Tel: (01223) 311881
Fax: (01223) 312010
E-mail: info@colton.co.uk
Price: Recordz £99 +VAT
Fireworkz Pro £149 + VAT
Upgrades to Fireworkz Pro from Fireworkz or Recordz £49, from Wordz £89, from Resultz £69, from Pipedream4 £99, from Pipedream3 £124 – all plus VAT. Site licences available on all options.

Pros: Fast database engine • Good user Interface • Integrates well within *Fireworkz*

Cons: Not relational • Limited indexing

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GAME SHOW

Greetings to all you avid gamesplayers out there. For those that don't already know me, I'd like to introduce myself as HAL, and I'll be doing my best to bring you the latest in games news along with a liberal scattering of hints and tips. If you've got any information you'd like to share, please send it in and I'll make sure it gets the audience it deserves.

Games news

If your trigger fingers are still itching after playing *Wolfenstein 3D*, you'll be pleased to know that Frank Isidor's *BioHazard* is coming along nicely, and he's just been adding the final touches to the manic Deathmatch feature. From what I've seen of the graphics, we're in for a visual treat. The title screen is a good indication of what lies in store – it's been professionally raytraced and oozes the sort of atmosphere that brought players running to the PC game *Doom*. If the rest of the game's of the same quality, be prepared to spend quite a few late nights glued to your screens.

Frank's also been working on *Virion*, a game that claims to be a cross between *Tetris* and *Lander* – if you can imagine such a combination. Frank says that the graphics artist for the game was responsible for the lavish backdrops in *Lemmings*, so I'm hoping for some high-quality artwork. Keep reading the column for more news, and I'll get back to you as soon as I've figured out how to describe the gameplay.

Fans of the 8-bit classic *Quest* will be pleased to know that its author, Tony Oakden, is planning to release a conversion for the Acorn. Tony's concentrating on the gameplay at the moment, and a friend of his is providing the graphics. *Quest* should be released before summer, and I'll get some more details for you as soon as I can.



Oregan's latest title, an arcade-style racing game by the name of *Burn Out*, is due to be released almost immediately. Unfortunately, it looks like it'll be shipped without the serial-link multi player option promised initially, but David Flynn, a co-author of the game, says a low-price upgrade will be available once they've overcome the difficulties that faced them – they didn't want to delay the release of the title any further.

Machine Love are concentrating their efforts on two titles at the moment; you can look forward to *Dragon Warriors*, a game cast in the *Streetfighter* mould, and *Stryker's Run III*, a scrolling shootout with *Turrican* influences and a plot which unfolds with the help of animated Manga-style artwork between levels. I managed to catch a glimpse of the latter at the Wembley show, and it's showing a lot of promise. I've also heard that Machine Love has been working on a conversion of a cult BBC title. I'll leave you to guess about that, but needless to say I'll have some problems tearing myself away from it.

If things seem a little quiet on the games front right now, be prepared for a sudden rush – I know of some monster titles on the horizon, but I'm afraid I can't release much information right now as one or two things remain to be finalised. However, don't despair – just keep your reflexes sharp, and prepare yourself for what could be the biggest title to hit the Acorn so far. I can't wait.



Burn Out is due for imminent release – although the serial link option will have to be distributed as a later upgrade.

3DO update

Jimmy Imossi from Gibraltar has written in to pose a few questions about the 3DO multiplayer, announced to the world in a blaze of publicity some time ago, and he complains that we haven't heard a lot since. I have to say I've been watching its progress with

great interest, not least because it was designed with an ARM chip buried deep in its architecture. Although I was rather optimistic when I heard of its impending release, I have to say those initial feelings of euphoria have diminished somewhat.

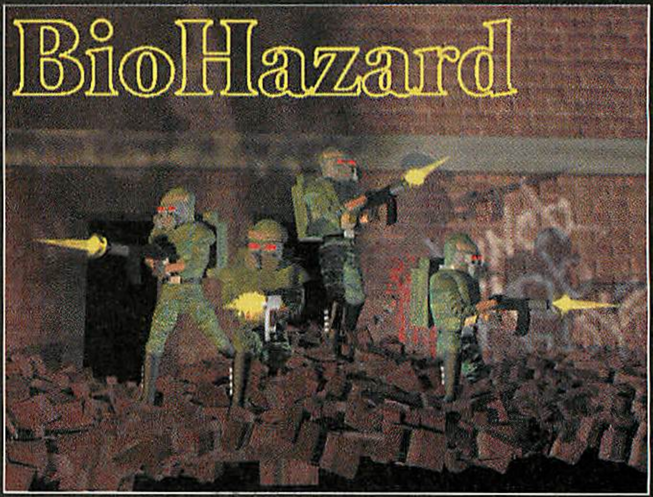
When the specifications of the machine were first announced, the ARM chip that was to power it had just surfaced – it was one of the most suitable chips around at the time. However, the release of the 3DO was delayed and two other consoles were announced shortly afterwards. If you've heard of either the Sega Saturn or the Sony Playstation, you'll already know that these are impressive pieces of hardware and the Playstation in particular can easily compete with the 3DO.

The ARM60 had lost its edge by this stage – ARM themselves had already announced plans for more advanced processors – so the people behind the 3DO decided to start work on a second version. Codenamed *Bulldog*, this enhanced processor will be available as an add-on for the original 3DO, and will be included as standard in new systems when it's been completed. What this means to you and me is that the ARM60 is effectively being replaced by a non-ARM chip, so we've lost another flagship of ARM technology.

Jimmy also mentioned that the 3DO will eventually have the capabilities of a set-top box – a device connected to your television to allow such things as video-on-demand, electronic shopping and extensive networking. He's worried that this might provide unfavourable competition for the Online Media set-top box which is being produced at the moment – however, I don't think this will be a real concern as the Online Media box has been specifically designed with those functions in mind and does not have to compete in a market where victory depends on the number of polygons you can draw every second.

Jimmy asks whether we will see a 3DO card produced for the Risc PC, in the same way that versions have been provided for the IBM compatibles – this really depends on the volume of users who already have a CD-ROM drive fitted, and at this stage, there's just not enough to make production of such a card commercially viable. After all, the Acorn would have to have a roaring CD market of its own before it could branch out into other formats, and I think most of us would agree that we have some way to go on that score. Although the 3DO is making waves in the area of interactive entertainment, it has yet to be accepted as the standard and until it's firmly established, I don't think we'll see its compatibility spread that quickly.

The 3DO is certainly an impressive piece of kit, but I'm afraid it's been let down by the poor timing of its release. When faced with the awesome games capabilities of machines like the Sony Playstation, I have a hunch that many people will forget the multiplayer ideas of the 3DO and instead go for a console that is currently faster and more impressive in many ways. Until the powerful Bulldog is released on the unsuspecting public, I don't believe the 3DO will get the exposure it craves.

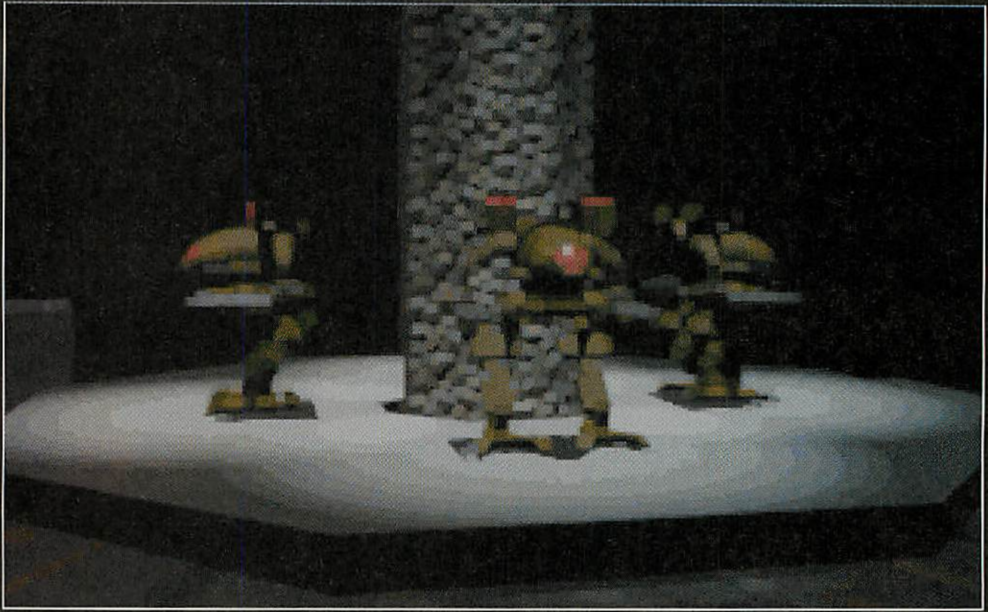


And finally

If you've been experiencing difficulties with *Star Fighter 3000*, produced by FedNet, it might be worth your while making the upgrade – early versions were liable to crash every now and again which, although allowing the truly addicted player a well-earned break, did not do much to enhance the gameplay any further. The *Hard* levels were particularly hard, since it was impossible to complete the first mission in that category due to a rather unfortunate lack of targets. If these problems sound familiar, contact FedNet on (01332) 842803 for more information. I'm waiting for the release of the completely texture-mapped special edition that one of the programmers mentioned!

That's all for this month, so thanks to all those people who have supplied me with information and thanks to you for reading. For those of you who prefer not to shamelessly cheat their way through to a game's end sequence, I'd like to include a few more playing tips in future issues. If you've developed any winning strategies or chalked out a few helpful maps, please send them in and I'll pass them on. Get ready to play those forthcoming releases, and I'll see you again next month.

Steve Mumford



Frank Isidor's *BioHazard* is progressing quickly and by the look of those graphics, it's going to be a smash.

Oddball

Supplier: Digital Psychosis
Address: 14 Madingley Road, Cambridge
Price: £8.95

This game came with a nice cover letter explaining the game, a great little converted CD case and to crown it all, a colourful, well-designed insert to show the game off to full effect.

Also included were some doubtful suggestions as to whether I was going to enjoy the game – it being a budget offering. Wrong! Not only was I impressed by the time and effort spent on marketing, but I was also bowled over by the game and its concept.

Oddball is not the first offering from Digital Psychosis, indeed they were also responsible for *Asylum* which I had the pleasure of playing. On first examination, *Oddball* looks like another one of these 'Breakout' clones the Japanese were so fond of a few years ago. Look a bit closer, in fact play the game, and you will see that the designer and programmer, Andrew Southgate, has taken the game firmly into the '90s and the Acorn market with what would seem to many as the perfect balance between platform/breakout and even shoot-'em-up, plus a touch of strategy to keep the mind on overdrive.

You must guide a ball onto green blocks which are littered in groups around a playing area. Once the ball touches a block it disappears. Some blocks are valuable because they release power-ups or bonuses, but some merely allow you nearer the end of the level. The playing area has its limits which are depicted by a long drop into the void. If you let one of your balls drop off the edge you loose a life. The bat is huge and can be guided around with startling speed over the playing area. This has drastic effects on the ball, so calm your movements and time the strikes well so as not to lose control or speed the ball up too much.

At your side is a radar unit showing the playing area. This allows the player to time and judge what moves should be made which is very handy when dealing with multiple balls – and the panic takes longer to set in. Controlling the ball is a very delicate affair as too much touch will cause you to lose accuracy and valuable time points. Some of the blocks contain a star which, once run over, must be collected when it falls. This bonus is either banked in the goodies section for a later date or activated immediately. For later use just hit the middle mouse button to select, then the left button to activate.

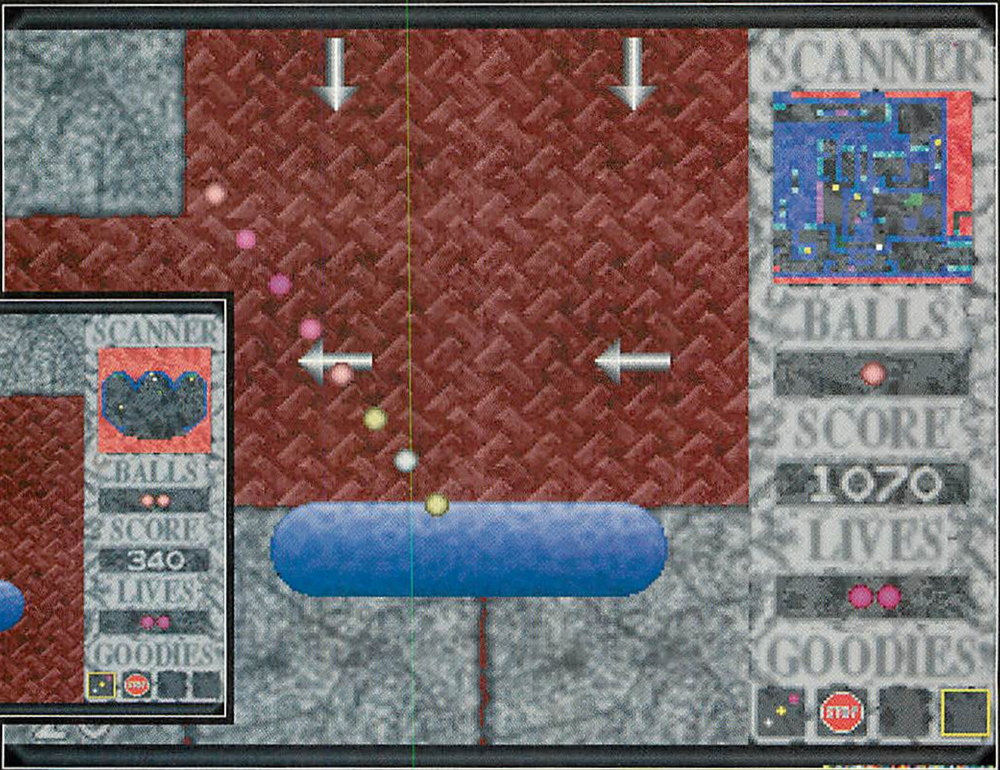
As the playing area can be so large, just about any help you get is invaluable, so first make sure you have the radar switched on which helps you keep track of everything. Also hidden around the playing area are various bonus levels. These are quite a challenge, with the object being to guide as many balls to the designated exit as possible within the set time limit. There are three difficulty levels: Beginner, Expert and Psychic. Don't even contemplate the latter if you are just starting as the game would be impossible to say the least.

The Power-Ups are many and should be learnt if you are going to get anywhere in this game. The following are the ones I discovered to be the most important:

- FREE BALL (a ball icon) – gives you another ball to play with in the area. Be very careful here to 'group' balls so you are not constantly running around the playing area.
- MAGNETIC (a magnet icon) – allows the ball to be more easily directed onto the bat. The ball will swerve direction towards the player and takes a little getting used to.
- LINE RADAR (a line of dots) – this is standard on the beginner level and is a helpful aid involving a series of dots which point toward the nearest ball.
- FIRE BALL (a fireball icon) – very useful with the ball spitting flames and destroying all bricks within range. Bricks are also destroyed at considerable range from behind walls.

All in all a great game! A great price, great artwork, careful programming and a super gameplay make this an essential item. A great month indeed!

Steve Atherton





Big Bang

Supplier: Psycore
Address: PO Box 3837, London NW3 1JF
Price: £14.95

Core blimey missus! It's only gone and 'appened again! Yet another meekly packaged and rather insignificant disc has been launched into the limelight. Physical characteristics hide this really rather great offering brought to you by the makers of *Top Banana*. I'm afraid that one passed me by as did any recognition of the creators but boy, what a great little game they have come up with this time!

Things look dire on booting up, with rather a sad little picture hailing the start of *Big Bang*. I admit it was here that the disc was nearly removed with haste and another game crossed off my list of column hopefuls. However, maybe something distracted me, like a small drip of water from the ceiling, because next minute the monitor burst forth with noise. Not only that but a complete set of instructions was provided, allowing me to dispense with the guesswork and get right down to playing, and play I sure did.

There is something quite nauseating about some of the cute characters around now – nearly every software house has tried 'The Next Sonic/Mario' and failed. Okay, maybe not failed entirely but I certainly don't see the likes of Zool opening a Theme Park or having a country set aside for producing merchandise. So why bother? Well, why do we enter the lottery then?

Anyway, Psycore has created a great little character and I hope they know it, with shades of 'IT', Krusty the Clown and even Bubsy the Bobcat in there somewhere – the little hero just fits in with the whole plot and backdrop. The head appears attached by elastic and its scream when dying is err... a little disconcerting.

The plot for this game appears reasonable enough. A 'Y' class planet known as Trisula Ultra is populated by a simple and somewhat brainwashed race that are content with their industrious lifestyle. However, a splinter group led by a team of scientists has discovered a new and important alternative, with a protection shield that must be built from various rare items. These rare items are littered around the planet surface and must be collected. Things get tougher when you realise the other side is out to stop you by collecting the items first. The challenge lies in speeding around the scenery from level to level, avoiding the evil advances of the opposition.

Many of the super heroes that roam the underworld of the platform adventure have had some pretty awesome weapons at there disposal, what with Plasma Cannons, Smart Bombs and even deadly Mega Lasers. Jellyhead, our hero, has a final ace up its sleeve – using teddy bears. Yep you read that right. Collect the bouncing teddies and use them against robots, large teddy heads and even brick walls to show your deadly intentions. Collect more teddies and insure your life because contact with the enemy takes these collected items away.

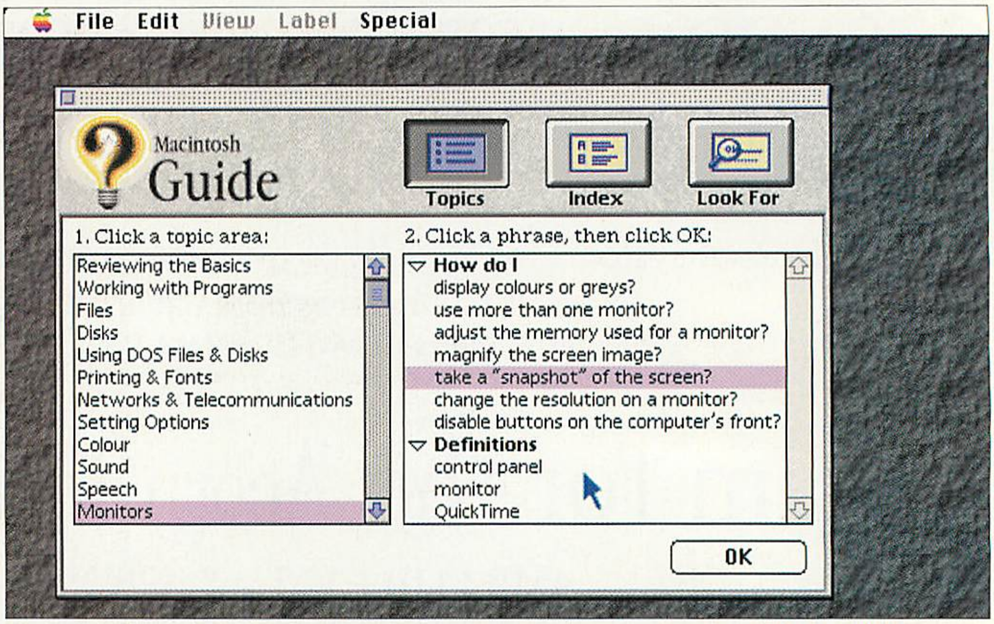
This game looks big and playable with colourful renditions, plenty of enemies and, as I said before, rather a cute little character to play with. Control could not be simpler with left, right, jump and fire being all you need for a grand day out.

I hope this game gets the attention it deserves. At the price pitched I see no reason for *not* adding this to the platformer's ammunition.

Steve Atherton



Letters



The Apple Guide on the Macintosh removes the need for long, boring manuals, and provides a complete tutorial for System 7. Where's the equivalent for RISC OS?

Sad support

According to one software developer for Acorn machines, I am just the sort of customer Acorn needs. Last November I decided to move away from end-of-the-line 486/Pentium-based computers to the Acorn RISC machine because I was looking for the best graphics-handling technology for my technical consultancy. Three months later, I am wondering how on earth the Acorn-based industry expects to survive in the modern world.

Quite simply, if you Acorn support people out there can't get your act together, then no sensible businessman will look at your equipment or services – we just can't afford the bungling and incompetence that seems to pervade the whole sector. You may have a good thing going in education, but you certainly need to smarten up your act when you start dealing with people who appreciate that time costs money.

What do you imagine you are doing? From the very start there have been warning signs. One company quoted £50 more than Acorn's recommended price for a basic Risc PC. Then I found that some hardware and software wasn't actually available and it had been advertised sometimes months in advance and at heaven knows what cost in full-page advertisements.

I've tried, without success, to get hold of an Iota scanner, *Termite Internet* software (both advertised in your magazine for several months already) and the *Zenta Fonts* CD-ROM from Skyfall. Some goods I have managed to get are still in their boxes because the Acorn manuals aren't written yet – for example, Eesox's Aristo College Board and a Trust modem that had only DOS/Windows software which I bought from Minerva.

Other expensive equipment is idle because I can't plug it in. At Watford Electronics a salesman forgot to mention that Canon doesn't supply a SCSI cable with its scanner, despite my ordering it with the Cumana SCSI 2 interface that was essential to connect it to my Risc PC. For approaching £1000 outlay, this really is poor customer support. His company knows (but I did not) that Canon only supplies the cable and terminator as a kit; a small note mentions this half way through the manual which is, of course, included in the scanner's box!

I shall persevere with this equipment, not least because I have already spent a bundle on it. But will I be recommending it to any of my colleagues? Only if suppliers stop pleasing themselves how they run their businesses and start to provide the sort of service that customers are entitled to expect.

I am writing this on my old-fashioned, slow 486 DOS portable – it's clumsy and *Word Perfect* is easily outshone by *Impression Style*, but at least it's reliable and I can get on with my work. Education may be a cosy, sheltered market, but you won't get anywhere in the outside world until you get your heads out of the sand and start providing real service. Unfortunately, it doesn't take many bad apples to spoil the whole barrel. I wonder just how many other people have had similar experiences.

Douglas Cross
Devon

With the threat posed by world-dominating PC and Mac technologies, the Acorn market certainly can't afford to have any bad apples spoiling the barrel. If a dealer mucks you around, demand your money back, and go somewhere else: generally, I've found the standard of Acorn dealers to be higher than the typical PC box-shifter, but some could sharpen up their acts. By not shopping with them, they'll eventually die: the Darwinian principle of dealers, if you like. Remember, at the end of the day the customer is king, and the law is on your side. (MM)

Server slip-up

I am writing to correct an impression left by the news item 'Datathorn lands first big Super Server contract in Scotland' on page 14 of the February 1995 issue.

Although both Chigwell and St Aubyn's schools were trial sites – and are reference sites – your comment that 'the first commercial customer is to be Hutchesons in Scotland' leaves the impression that *they* were *not* commercial. On the contrary, both installations were supplied at normal rates with appropriate education discounts.

Chigwell has a new IT building scheduled to open in September 1995 and we shall be re-installing their Super Server as the centre of a school-wide fibre optic distributed network when the new premises are ready.

St Aubyn's have both their academic and administrative systems on the same network, using A3000, Risc PC and IBM PC clone computers concurrently.

Vince Hagedorn
Datathorn

Congratulations

When you ceased to use Acorns to produce your excellent magazine (which I have on yearly order), I criticised you in the Letters pages...

Welcome back! The February issue and the article 'Hot off the press' is just the tonic I need on a cold winter's day. Well done, keep it up. I shall now continue to support the magazine that actually uses the machine it extols – not many PC, Amiga or Atari magazines do the same, I'll bet.

By the way, in the last year I have built a 386SX, 4Mb RAM, 3.25in FDD, 5.25in FDD, 2 x HDD (40Mb), Soundblaster, CD-ROM, Windows 3.1 and a share of my Canon BJC-600 – a superb printer. It's been fun and cheap, but it's so nice to get back to the speed, solid reliability and ease of use of my A5000 for the real work, DTP, accounts and so on. Having the operating system in ROM is *so* secure. I'm now quite good at resetting

CONFIG.SYS, AUTOEXEC.BAT, WIN.INI, SYSTEM.INI, re-installing Windows and other files when a CD-ROM over-writes a file or when a power failure occurs in the middle of a program; but even if Windows was in ROM, it's still a laborious GUI.

Long live the Acorn!

Gordon Carruthers
Cardigan

A couple of points. First, we're back on the Mac, so don't get carried away that we're an Acorn-produced magazine again: it was a one off.

Second, we still use the Acorn machines extensively in planning and creating the magazine – we always have. All the copy (raw text to you and me) is produced and stylised in *Publisher Plus*, and almost all screenshots and diagrams are originated on the Acorn. These are then converted to *Quark* tag files (for text), TIFFs (for sprites) and EPS files (for line illustrations) and are laid out on the Mac.

The editorial team uses Acorns for letter writing, filing, accounting, flatplanning, storing data, and for everyday use. The adverts in the magazine are, for the most part, sent in as Acorn documents, and they are sent to the typesetter in the same way as the February issue was. So, we use Acorns extensively in the production process: in fact, we'd be stuck without them. (MM)

Cover up job

I have been following with interest the Acorn vs PC argument. We are Acorn-based at work (20 machines), and also have four 486 66MHz PCs.

Not wishing to fall into either camp, or feel aloof about the matter, I know which I prefer. I shall be ordering 20 dust covers... Gortex, of course...

C R Tatam
Matlock

Crystal cloudy

After Ian Burley's recent comments in your magazine about maintaining the viability of RISC OS by further investing in it, may I suggest your crystal ball needs polishing up a bit. It would surely be a monumental mistake to invest further in an operating system that no longer meets Acorn's aspirations or future needs.

Future needs, such as a multi-processing system that is compact and scalable; a system that can run on different processors; a system that can run different front-ends and so take on the personality of other operating systems; a system so that Acorn programs will run directly on PCs or Macs.

You might think such a thing is impossible until you wonder why Acorn has taken such an interest in TAOS or in IBM's personality server that sits on top of microkernal operating systems like TAOS.

Perhaps it becomes a little more obvious why there has been no recent development of RISC OS.

David Jewson
Loughborough

I don't think many people doubt that the future of computing will involve platforms that can run multiple operating systems: the PowerPC chip was specifically designed to, eventually, run the Mac OS and Windows-type operating systems, but it's the time scale that isn't so sure.

Windows '95 looks like becoming Windows '96; Apple's operating system plans are to extend System 7 into System 8 and further by including features like pre-emptive multi-tasking and platform independence, but there are no shipping dates as yet; and in the meantime there is an educational user base looking for improvements in the operating system.

Sure, RISC OS will probably disappear into the quagmire over the next few years, but if development on it stops now, then it will disappear more quickly, along with all those Acorn machines out there that can't run anything else. The Risc PC is all very well, but it's still been designed primarily for use with RISC OS, not Windows or the Mac OS. Time will tell. (MM)

Viewpoint

The Acorn platform is supposed to be one of the easiest machines to use: at least, that's what a lot of Acorn users feel, and if you can handle Windows, you can handle RISC OS – I doubt it's the other way round, though. Windows is not an easy operating system to get to grips with, even if you're a GUI guru.

Apple sells its Macs on the same sort of principle: the OS interface is an aesthetically pleasing environment, designed to increase productivity and enhance the potential of the computer as a creative tool (at least, that's what the blurb says). The Mac falls down in some areas – the save and load dialogue boxes are considerably less friendly than dragging and dropping in RISC OS, and memory management on the Acorn is much more flexible than under System 7, where fragmentation is still a problem – but overall it claims to be an easy-to-use system, and most people would agree.

However, there are a couple of areas where RISC OS falls down: on-line guidance, and intrusion of the underlying operating system.

On-line guidance is only really present in RISC OS in terms of the interactive *Help* application, and a large number of commercial applications don't bother to implement help messages, so it's of dubious value. Even those that do tend to be quite terse. Apart from *Help*, third parties have had to provide their own help systems, like the excellent linked pages of help in *Impression Style*, and the natty little button bar help line in the *Fireworkz* family.

What about the PC and Mac? Not surprisingly, both systems provide a stunning amount of help and guidance: almost every application on the PC has extensive help information on everything, and it's all accessed in the same way, from the Help menu on the menu bar. Mac applications aren't quite as comprehensive, in general; the System 7 equivalent of *Help* – Balloon help – has only caught on with a few applications, but System 7.5 has introduced a whole new concept of on-line guidance, called the *Macintosh Guide*. It's a complete index-based 'multimedia book' system which contains information on everything under the sun, and this system can be used by third parties to provide help for individual applications. It's so flexible that the Power Mac doesn't come with a manual beyond the basic setting up guide: the manual basically says 'if you want to know how to do something, look it up in the Macintosh Guide'. And it works.

Another area where the Acorn falls down is in the tutorial section – the sort of thing you're going to want to do when you've just bought your machine. Acorn's tutorials consist of a bunch of sprite and *Draw* files on disc, with no instructions whatsoever: you have to delve into the *User Guide* to find them. The fact that the *Draw* tutorial doesn't appear until page 182 in the *User Guide*, and the *Paint* tutorial starts on page 272, is enough to put most people off. Face it – when you get a machine, do you really want to plough through pages describing networking, colour pickers, printing and fonts before you get to the first tutorial? Of course not.

So what happens on the other platforms? The first time you run the Macintosh Guide you are offered an on-screen tutorial, and it's great. It's slick, beautifully designed and drawn, and even though I'm a mouse veteran, I wanted to go through all the painstaking descriptions of pointers and close icons, just because it was so well presented. The same goes for Windows: when you first install it and you've managed to get it running, you're offered a tutorial that takes you through the basics – and it's worth taking.

The other problem area is the underlying system, where things like boot sequences and system variables lurk. In Windows it's hell: see Gordon Carruthers' letter for examples. On the Mac the underlying system is completely invisible, as it should be. However, on the Acorn you only need to accidentally press F12 and you're in trouble. Why can't we disable this feature, if we want?

So let's get a decent tutorial for RISC OS. And an interactive guide to the operating system. And hide the command line better. Then Acorns will be *really* easy to use.

Mark Moxon

Spring time

Next month we'll be bringing you the full low-down on the Harrogate show. And there'll be plenty to see...

Plans for the *Acorn User* Spring Show are nearly finalised, and we'll be presenting a complete guide to the show in next month's magazine. In the meantime, here's a quick taster of what will be on show.

The theatre

One of the most entertaining aspects of the Spring Show is the Theatre. It's totally free, and the spread of presentations this year is bigger than ever.

One of the highlights of the theatre is the *Simon the Sorcerer* presentation from Gamesware. This family adventure game is great fun to play, and the experts from Gamesware will show off the best parts of the program, asking for help from the audience. Our show celebrities, Dominik Diamond and Violet Berlin, will be helping out, so make sure you don't miss it.

Acorn User's editorial team will also be on hand, so if you've got any questions you want to ask us in public, don't miss our slots at 2pm on both Saturday and Sunday. And if you need specific help on technical issues or just want to talk to us about the Acorn market and the magazine's place in it, we'll be on the main stand all day every day.

Little Acorns

The Little Acorns stand, sponsored by Sherston Software and Skillsware, is the perfect place for four to ten-year-olds. You can drop your kids off at the stand where they'll be able to play with various educational titles, like *Rosie & Jim* and *Playdays* for half an hour, while you go off shopping for that elusive printer cartridge, or the latest in shoot-'em-ups.

Little Acorns is totally free, and is a great way of getting your children to play with the computers under the watchful eye of educational experts. And who knows – you might even find the odd child refusing to leave the stand when mummy and daddy have to go home...

Club corner

One of the most popular stands at last year's show was the Club Corner, where the crème de la crème of Acorn user groups can meet their members and show everyone else the benefits of membership.

The indomitable ARM Club will be present, showing why they're one of the biggest names in the club scene, and the Wakefield Acorn User Group will be out in force. Both these clubs have featured in our Club Corner page in the magazine, so don't miss out on your opportunity to join.

For those who are still avid fans of the older BBC micro and Master systems – and who isn't? – the 8-bit Software User Group will be demonstrating that there's life in the old dog yet. The group has a very large 8-bit Public Domain library – which includes all the 8-bit software published in *Acorn User* over the last 13 years – and is one of the best ways of meeting BBC users now that the mainstream magazines don't cater for 8-bit machines any more.

Concorde flight draw

If you're a high flyer, or you just fancy being able to see the sun set over a curved horizon, you'll want to enter our free draw for a fabulous flight for two on Concorde. The draw will be taking place on Sunday 7th May at 5pm, and the winner will be personally notified by the editor of *Acorn User*.

We'll also be present to see the lucky winners off on their flight of a lifetime, along with the organisers Safesell Exhibitions, who will be recording the event for posterity. So make sure you enter – everyone's welcome.

Celebrities

As revealed last month, our two show celebrities are Dominik Diamond on Saturday 6th May, and Violet Berlin on Sunday 7th May. Expect crazy antics galore, along with expert games-playing advice, and the odd autograph session.

Dominik wowed the crowds at the first *Acorn User* Spring Show two years ago, and even earned himself a coveted Moxon Interview. Violet, the bubbly presenter of Yorkshire TV's *Bad Influence*, will be on hand to show off the gameplaying skills that have earned her big respect from gamesplayers everywhere, so if you're a games fan there's something for you on both days.

Other features

We've got a free lucky dip, a free Show Guide and carrier bag, a schools' competition to design and print a brochure (sponsored by Akalat Publishing), the *Acorn User* schools' competition results, the daily information notice board, and much more.

If you want tickets, they are priced at £5 for adults, £2 for children (under 16) and £12 for a family ticket, which will admit two adults and up to three under 16s. The show is open from 9.30am to 5.30pm on each of the two days, and is in Hall C of the Harrogate International Centre.

You can obtain tickets by writing to Safesell Exhibitions Ltd, Market House, Cross Road, Tadworth, Surrey KT20 5SR: cheques should be made payable to Safesell Exhibitions Ltd. If you want to buy your tickets by credit card, then you can do so by ringing the credit card hotline on (01737) 814713: both Visa and Mastercard are welcome. AU

Theatre programme

Time	Saturday	Sunday
10.30 - 10.50	VTi	VTi
11.00 - 11.20	Sherston Software	Sherston Software
11.30 - 11.50	Acorn Computers	Acorn Computers
12.00 - 12.20	Computer Concepts	Computer Concepts
12.30 - 12.50	Clares	Oak Solutions
13.00 - 13.20	Krisalis	Clares
13.30 - 13.50	Longman Logotron	Krisalis
14.00 - 14.20	Acorn User	Acorn User
14.30 - 14.50	Anglia TV	Reserved
15.00 - 15.20	Gamesware	Gamesware
15.30 - 15.50	Sibelius Software	Sibelius Software
16.00 - 16.20	Spacetech	Anglia TV
16.30 - 16.50	Oak Solutions	Acorn Computers
17.00 - 17.50	Acorn Computers	Concorde Draw

Club corner

Chris Jackson looks at Spectrum, one of the disc-based magazines produced by Acorn enthusiasts.

Spectrum is the name of a new public domain disc-based magazine produced by the Sounds Riscy team. It aims to provide free information to the Acorn world through a multimedia-style interactive reading application. As with all PD disc magazines, the wait between each issue is quite a while, but the excellent articles and graphics make up for this.

Inside the *Spectrum* software directory is a selection of high quality public domain software, some from the Sounds Riscy team, as well as other PD authors. The archive of issue two of *Spectrum* contained nearly 1.5Mb of files, which is along the same lines as the other major PD disc magazines, such as *New Dawn* by the Quantum team (which is no longer being made).

There are a few reviews of commercial products in issue two but Russ Mckendrick, the editor, tells me they have been having trouble finding products to review as companies don't usually take disc magazines seriously. However, after many phone calls to Acorn software houses he has been promised scores of software packages to scrutinise on behalf of the magazine.

Lovell Fuller, who coded the new hyper-linking viewer for *Spectrum*, is proud of the fact that the reader base of *Spectrum* has grown beyond all expectations; he estimates between three and four thousand copies are distributed.

The latest issue of the magazine, *Spectrum 3*, has a totally new interface for viewing the 'zine's contents, which reminds me of the *Sibelius* interface with its full screen scrolling viewer. It works quite well too, and gives the impression that you are using a DTP package to view an A4 printed magazine. The viewer now uses a higher resolution graphics mode than the previous issue, which many of you will be relieved to find out as the text was barely readable in issue two because of the low resolution mode used. On the side of PD, *Spectrum 3* has quite a lot to offer, again the fruits of the Sounds Riscy team are offered alongside those of other PD authors. I particularly enjoyed Colin McEwan's computer poem column – it was rather amusing, and is a must to read. The *Spectrum* disc magazine has even got its own fiction writer, Johnathan Kirk, better known as 'Kirky', who writes most of the fictional material for the magazine – some of which is very strange – which is interesting to read.

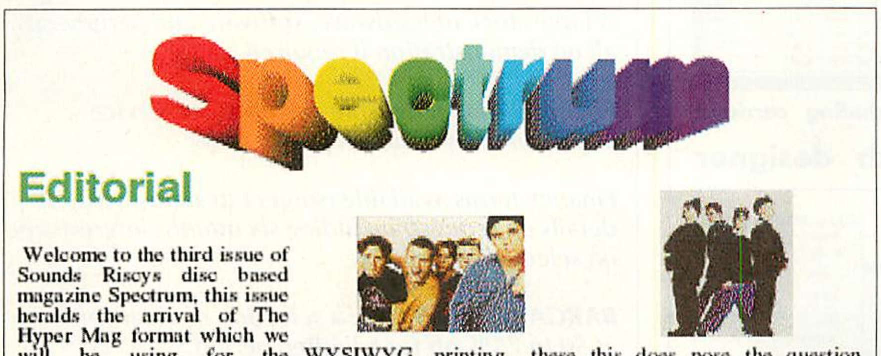
Issue three will probably work on 1Mb machines, as special decompression techniques are used to de-compact the files from disc on-the-fly, so they don't take up precious memory.

The desktop front-end, written by Ian Scott, is very slick and allows a reader to enter a classified advert for the magazine without moving from the computer. It allows the user to enter the viewing utility by the click of a button, and has full interactive help. It will also allow you to print out the pages of the 'zine using standard RISC OS printer drivers. While this does really go against the whole idea of a disc magazine, some people may nonetheless find it useful to have a hard copy.

I look forward to issue four of *Spectrum*, and only hope that they keep on producing this superb disc magazine. I feel it is just what the Acorn community needs, it fits in well between the printed commercial magazines like *Acorn User*, the subscription-only magazines and the PD magazines such as *LunchTime* and *Opinions*. AU

Where can I get Spectrum 3?

If you are online, you will be able to download *Spectrum 3* from the main bulletin boards (The Northern Arm, Digibank and Arcade), otherwise you will be able to get Spectrum 3 from all the main PD libraries, Datafile, APDL etc. Failing that, you should send an SAE and a disc to Sounds Riscy (SPAU3), 116, Summerwood Lane, Clifton, Nottingham NG11 9FY, and you'll be entered into a super competition to win various pieces of software. Sounds Riscy can be e-mailed at sndriscy@digibank.demon.co.uk.



Spectrum 3's full-screen scrolling viewer gives the impression of using a DTP package to view the text.

Contacting me

I would be interested to hear from any Acorn-oriented clubs throughout the world (especially Scotland) to cover in this article. You can get in contact with me by e-mail at cjackson@digibank.demon.co.uk, via my own BBS 'The Northern Arm BBS' on (01274) 530831 (at up to 14k4) or by post at The Club Page, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

In brief

Under scrutiny this month:
Fancy Impression borders
• Wortgut and Lexique
• Avery label creators • Blinds
• Basic AOF • Sound samplers

Wortgut and Lexique

Supplier: Fabis Computing
Tel: (01283) 552761
Price: £12.50 inc VAT

Pros: Simple translation of French and German • Convenient to use • Some grammatical information
Cons: Limited vocabulary

Computers do have some advantages over books. What foreign language dictionary lets you add and delete entries, select entries by topic or transfer an entry into a document without typing it? These German and French dictionaries on disc do just that, with the added convenience of being present at the point of use, i.e. your keyboard.

Intended for students taking GCSE, the vocabularies are appropriately modest. You won't find *Unbestechlichkeit* or *peniche* in here, though you can add them if you wish. Each entry comes with (very) basic grammatical information: gender for nouns and whether verbs are regular or irregular. Where helpful, there is an example of use in context. With verbs this seemed to demonstrate forming the past (perfect) tense and prepositions carry a note of the case taken by the associated noun.

In *The Great Escape*, various English prisoners of war flee Stalag 15 by pretending to be German nationals engaged in such every day tasks as buying train tickets and thumbing lifts. Those relying on *Wortgut* would have enjoyed an early return to the punishment cells. Merely stating 'I'm from Berlin' would have blown their cover, since *Wortgut* provides *von* as a translation of *from* and even gives *von Bonn* as a credible example of usage. The correct *aus* is only offered if you click a subsequent entry, not originally offered. The common preposition *into* has no entry at all.

Lexique fairs no better, which may be why the Prussians negotiated such poor surrender terms at Versailles. Of the first nine words I looked up: *stream, sterile, yacht, dance, rainbow, comet, require, seek, search*, only one was there – *dance*; and I could have guessed that anyway. The word *ask* was rendered as *prier*, with no mention of the more common *poser*. Not satisfied, I tried *ask for* and was rewarded with *demander*.

The problem of accented letters and the German ß is solved by a little utility which redefines some function keys and was a bit quicker to use than *Chars*. Swapping from English-French to French-English is neatly accomplished with a button click.

These are very limited tools for serious students of the languages, but may offer something to school students through their convenience. The trouble is, there is no quick way to learn foreign languages and methods which seek to oversimplify the task are ultimately self-defeating.

Clem Vogler

Impression Borders

Supplier: Fabis Computing
Tel: (01283) 552761
Price: £9.99 inc VAT per disc

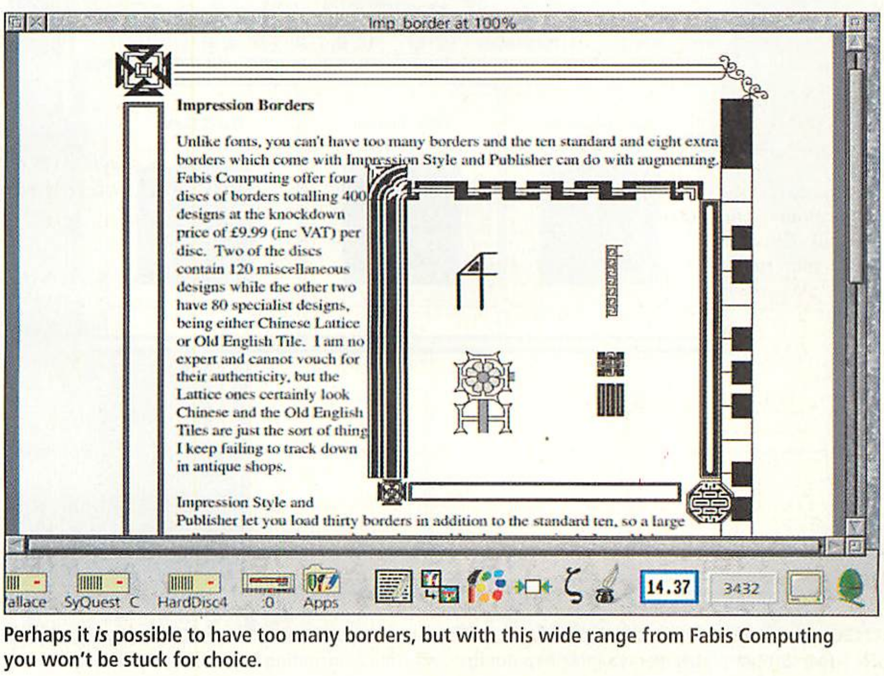
Pros: Excellent selection • Good value • Fancy designs
Cons: None

Unlike fonts, you can't have too many borders and the ten standard and eight extra borders which come with *Impression Style* and *Publisher* could do with augmenting. Fabis Computing offers four discs of borders totalling 400 designs at the knockdown price of £9.99 per disc. Two of the discs contain 120 miscellaneous designs while the other two have 80 specialist designs, being either Chinese Lattice or Old English Tile. I am no expert and cannot vouch for their authenticity, but the Lattice ones certainly look Chinese and the Old English Tiles are just the sort of thing I keep failing to track down in antique shops.

Impression Style and *Publisher* let you load 30 borders in addition to the standard ten, so a large collection has to be stored elsewhere and loaded as required. I wouldn't waste hard drive space on designs, most of which will be used infrequently (if ever). The important thing is to have a wide range available and to know what you've got. Fabis has used that unequalled rapid random access device, the booklet, to feature its designs, and my solution is to keep the four discs with their booklets in a convenient drawer and leaf through the options whenever border inspiration is required. It's the work of a moment to transfer the desired design from floppy to the *Impression* border loader.

The real benefit of Fabis's offering is the range. At 10p a design you will need to be highly specific and deeply impoverished to bother to draw your own.

Clem Vogler



Perhaps it *is* possible to have too many borders, but with this wide range from Fabis Computing you won't be stuck for choice.

Avery™ label software

For anyone who has had to hand-write envelopes for even a small mailing list, printable blank sticky labels were a gift from above – or at least, from the same place that provided those little damp sponge pads designed to stop your tongue tasting permanently of concentrated stamp gum. Now you could print out all the labels automatically, provided you could get the line spacing just right, or start the text in the right position, or persuade your database to put a space between addresses.

Naturally enough, software writers spotted a hole in the market and a number of different solutions to the problem have surfaced. I looked at one – *Ultilabel* – back in the Christmas 1994 issue of *Acorn User*. With this, you could import a CSV file and overlay the entries in it onto a *Draw* file design.

LabelStar from Circle Software goes one better than this in one important respect – it contains a simple address database, enabling your mailing list to be maintained by the program, rather than by some other database. While I would probably not use *LabelStar*'s address database as my main address book, it is easily up to the task of keeping various lists of commonly used addresses, and includes eight configurable categories for selecting just a portion of the address database. It also allows data to be dragged in from other sources – the address book on the Pocket Book being a prime candidate.

The addresses (or whatever – labels for home-made jam or your collection of Babylon Five videos are equally possible) can then be printed out on a number of formats of label. The common Avery™ label formats are built-in, but others can be configured. Text can be printed in either 'text' or 'graphics' mode. Text mode sends ASCII characters to the printer, using the printer's own built-in fonts; it is fast and especially suitable for older dot-matrix printers. Graphics mode sends the text as a bit-image using the RISC OS printer drivers; it is slower but gives much better output with laser and ink-jet printers.

Like *Ultilabel*, *Labelstar* allows *Draw* files to be printed on the labels along with the text – but the manual is very reticent on how to do this effectively, and I found it awkward. Neither program allows more than one font on a label.

The user interface of *LabelStar* is well-thought out, with excellent use made of interactive help. The manual is good too, with practical hints and a general sense of having been written by someone with the intention of explaining how to use the program, rather than as a rather annoying afterthought by someone who would be much happier programming.

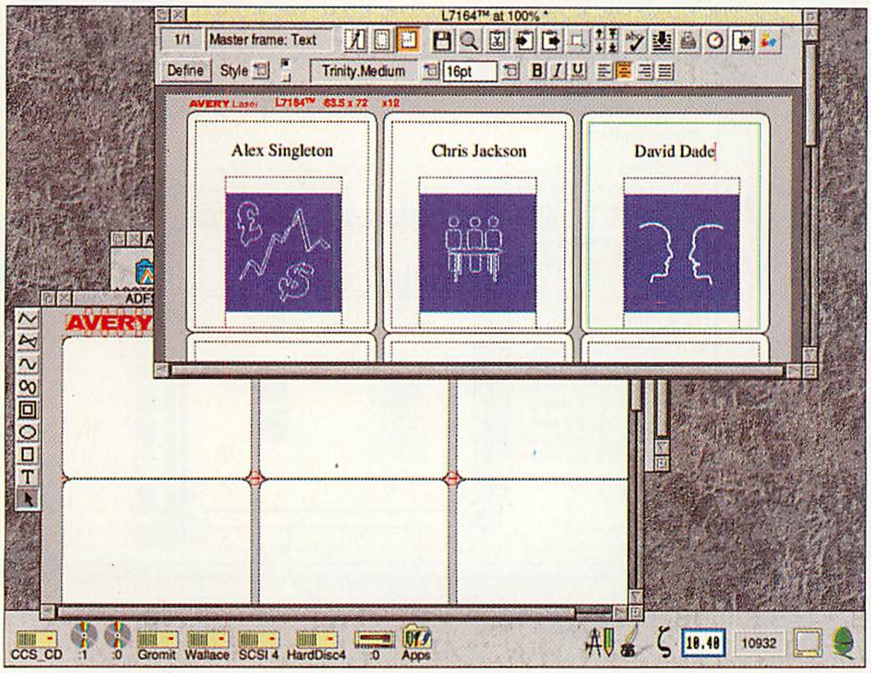
Papersoft takes a different approach, and has produced a set of templates with dimensions that match the Avery labels. These are available in *Impression*, *Artworks*, *Draw* and *Ovation* formats. The DTP-based ones are considerably more useful than the vector graphics-based ones, as they allow text from a database to be merged in.

All the Papersoft templates require the user to do the bulk of the design work – they just provide guides to work to. Within this limitation they are very well-designed, although the documentation that comes with them is a bit sketchy. Their advantage is added flexibility – you can change the design of the labels *much* more easily. This added flexibility comes at the expense of ease of use; you have to do much more setting up. I prefer the flexibility, but there are advantages to Circle Software's and Le Computer's approaches.

If you want to design your own labels, and just need a set of templates to get the positioning right, then Papersoft's templates are for you, though I would recommend the *Impression* or *Ovation* templates. For a good text-only label printer with a built-in address book, *LabelStar* is ideal.

Although *LabelStar* does support *Draw* files, I feel that *Ultilabel* is the best choice for automatic mixing of text and graphics. For what they are, I feel *LabelStar* and especially *Ultilabel* are overpriced. If either of them offered more control over the formatting of text, the price would be more justified. However, both do the job, and there are demos of both on the cover CD-ROM, so you can judge for yourselves.

David Matthewman



The Papersoft templates are available in a number of formats, including *Impression* and *Draw*.

Product details

Product: LabelStar
Supplier: Circle Software
Tel: (01793) 770021
Price: £49 + VAT

Pros: Integral address database • Good user interface • Can print ASCII text using built-in printer font for speed
Cons: Use of Draw files awkward

Product: Ultilabel
Supplier: Le Computer
Tel: (01245) 362225
Fax: (01245) 362048
Price: £58.69 inc VAT

Pros: Can mix graphics and text
Cons: No address database

Product: Papersoft templates
Supplier: Papersoft
Tel/fax: (01442) 391967
Price: Laser labels £14.95
Inkjet labels £7.95
(Ten per cent discount for education)

Pros: Label design limited only by the software used to create the labels: Draw, Impression, ArtWorks or Ovation • Avery laserjet and inkjet designs
Cons: Only templates supplied; no database software • No automatic CSV importing.

Blinds

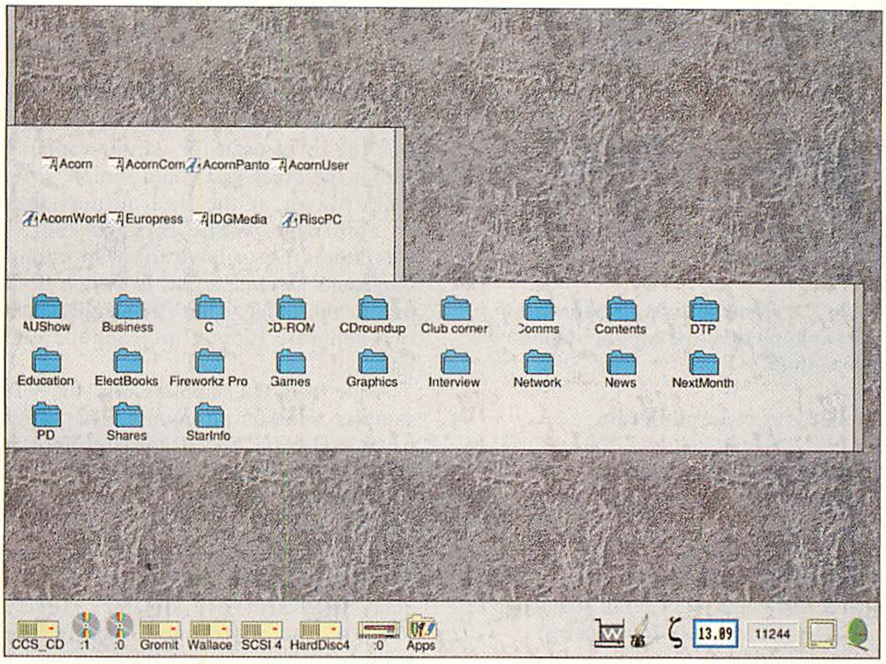
Supplier: Quantum Software
Tel: (01506) 411162
Price: £19.95

Pros: Useful desktop utility • Create your own tool bars • Tidies up pinboard

Cons: No interactive help • User interface could be better

Blinds is an incredibly useful desktop package from Quantum Software, the people who brought you *Keystroke*. The idea behind it is simple – you can place icons and sprites onto a mini-pinboard which can be toggled between taking up the screen or retracting, blind-like, to one edge. The blinds can be re-sized to take up smaller areas of the screen, so you can have many blinds along one edge, and they can also be 'stacked'. The only problem with this is that there is no clear way of identifying a particular blind from its 'shrunken' state other than from its position and the colour of the blind bar. You therefore need a good memory if you fill the screen with blinds, or you will have to open them all to find the one you were after, which defeats the object.

This is only one of many uses for *Blinds*. The blinds themselves don't have to be attached to the desktop – they can be set to appear whenever a particular program is loaded, or when one of its windows has the input focus. This enables you to load blinds with your favourite clip art collection on or a set of commonly-used templates as you load *Impression*, for instance. Even better than this, in conjunction with *Keystroke* you can set up a tool bar for an application, using your own customised sprites for the buttons. Quantum has provided a large range of such sprites – harvested from PC PD libraries – along with *Blinds*.



You can have several different blinds along one edge of the screen, and they can all be tidied away or pulled out as needed. Here they are attached to the left of the screen, but they can be on the top, right and bottom, as well as being linked to windows.

Blinds is, thankfully, easy to set up and use, and the manual contains a good tutorial section. There isn't actually that much to learn, although a few more dialogue boxes and fewer menus would have been easier to navigate. The three different editing modes – window, icon and none – are confusing and unnecessary, but overall this is an intuitive application, both in setup and operation.

You may find that you have to change the way you organise your desktop to use *Blinds* efficiently, but it will be worth the effort. If you still need convincing, there is a demo version of *Blinds* on the cover CD-ROM. *Blinds* requires at least RISC OS 3.1 to work.

David Matthewman

BasicAOF

Supplier: Oregan Software Developments
Tel: 0121-353 6044
Price: £39.95

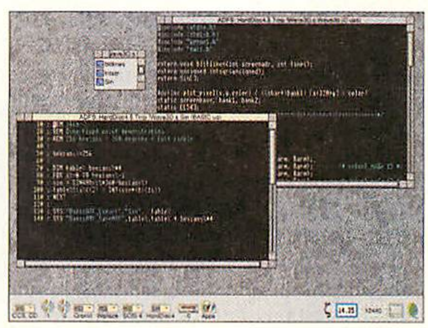
Pros: Allows BBC BASIC assembler to export AOF files • Assembler fragments can now be linked with other languages

Cons: Not for novices • Linker essential, DDE recommended

The BBC BASIC assembler is widely acknowledged to be an excellent environment for developing machine code programs; applications as varied as *Impression* and *Wolfenstein 3D* were written using it. It is also built in to the operating system on the Archimedes, so comes free with the machine. However, it has one huge disadvantage – it does not come with a way of linking different sections of code together, or of exporting sections of code for use with other higher-level languages.

There is an Acorn standard for fragments of ARM code to enable them to be linked together. This is the AOF (ARM Object Format) and is supported by the Desktop Development Environment, the *DRLink* linker, a number of PD languages but not – until now – the BBC BASIC assembler.

BasicAOF from Oregan remedies this. With a relatively small and easy-to-use set of BASIC SWIs and functions, any section of assembler can be exported as an object file. The manual is good, with a number of worked examples to explain the intricacies of mixing C and assembler, and even for using a combination of BBC BASIC and *BasicAOF* to create your own re locatable modules. The manual is biased towards someone with *Desktop C* and the DDE from Acorn, but this is understandable as you will need some set up like this in order to make use of the facilities provided by *BasicAOF*.



BasicAOF allows BBC BASIC assembler to be freely mixed with other languages, including C.

The manual will not teach you how to write applications, nor how to program in ARM code, but you should already be *au fait* with these skills before trying to use *BasicAOF*. The application is one for techies, but if you do write portions of your code in Assembler and haven't yet found an easy way of linking these portions to the rest of your code, it is well worth the money.

David Matthewman

Printer port samplers

Product: Printer port sampler 2
Supplier: VTi
Tel: (01243) 531194
Fax: (01243) 531196
Price: £46 inc VAT

Pros: Excellent software • Separate microphone and line inputs • Good microphone

Cons: Lower sampling rate

Product: Oak Recorder
Supplier: Solent Computer Products Ltd
Tel: (01954) 789701
Fax: (01954) 782186
Price: £50.47 inc VAT (Oak Recorder 2) £56.34 inc VAT (Oak Recorder 3)

Pros: Samples up to 32kHz on a Risc PC with VRAM • Export samples in *Draw* and *Paint* format

Cons: Microphone and line on the same input

Both these low-cost samplers attach to the printer port of your computer. The VTi sampler will attach to the full range of Archimedes machines, but the Oak Recorder 3 will not work on the older machines without a bi-directional printer port – A3000, A540 and the A300 and A400 ranges. On these machines you must use the Oak Recorder 2 which will sample to just 10kHz; good enough for speech but hardly CD-quality.

Assuming you have an A5000, A4, A3010, A3020, A4000 or Risc PC, you should be able to sample to over 20kHz with both the Oak Recorder 3 and the VTi sampler. At the highest end – on a Risc PC with VRAM – the Oak Recorder manages 32kHz with no problems, which gives a very crisp sound when sampling from a CD. You should only need better than this if you are going to play the sample through something better than the Arc's internal sound system.

Although the VTi sampler claimed to be able to sample to 35kHz (and helpfully blanked the screen while sampling to show that it was *really* straining itself) I couldn't coax more than 27kHz from it. I would only recommend sampling at 20kHz from the microphone, but this is probably not a limitation for microphone input.

Both samplers didn't like dongles; basically they tie up the printer port when in use. The Oak Recorder had one phono input and a potentiometer to alter the input level. At one extreme was the level used for the microphone and at the other you could sample from a CD player or the line output from an amplifier. While this worked, it was annoying to have to swap phono plugs and 'twiddle a pot' to switch from one to the other. The VTi sampler had two separate inputs: microphone and line.

Aside from the sampling rate, the VTi sampler wins on all counts. That's not to belittle the Oak Recorder which is a good product, it's just that the VTi sampler is better. For one thing, the VTi sampler's microphone seemed clearer and more sensitive than the Oak Recorder's one, though physically they are very similar. Mostly though, the difference was in the software.

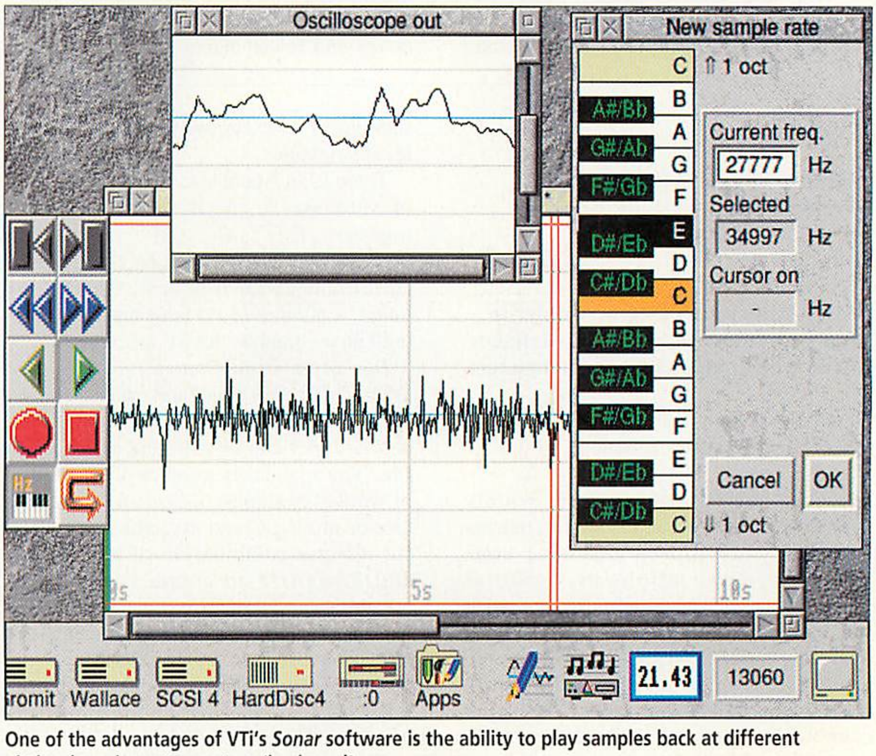
The VTi sampler comes with *Sonor*, an impressive sample editing suite. This is the same software that comes with VTi's more expensive MIDI sampler. The user interface is streets ahead of the Oak Recorder's *SoundLab* software – a large-buttoned, easy-to-use tool bar, interactive help, pop-up menus, one-step undo, input level monitoring – and the software really only lacks the ability to export samples as a *Draw* file or voiceprint sprite. The export of a frequency/time 'picture' of the sample by *SoundLab* is a bit of a gimmick, though I can imagine it being very useful in education.

SoundLab is itself a very competent sample editor, which can apply all the standard echo and fade effects, and it has the useful ability to record by adding to the sample already in memory. Both packages can be told to start recording at a certain 'trigger level', for instance when someone starts talking. *Sonor* from VTi does this best, allowing the trigger level to be changed easily from a pop-up menu on the control panel. *SoundLab* has an annoying habit of losing the first part of sentences when using this feature.

Talking Canvas Junior is also now bundled with the VTi sampler. This is a nifty mini-multimedia application which allows you to take a sprite and attach samples to 'hot spots' on it, even running simple two-frame animations. It really gives the VTi sampler the edge, and there is a demo version on the cover CD-ROM.

Both these samplers will satisfy the needs of someone wanting to put some samples on their computer – the 8-bit logarithmic samples are sampled at a high enough frequency for both the internal speaker and headphone outputs. The VTi sampler is really the better package unless you need 32kHz sampling or voiceprint output.

David Matthewman



One of the advantages of VTi's *Sonar* software is the ability to play samples back at different pitches by using a two-octave 'keyboard'.

Save over 25 per cent on this exclusive ACORN USER deal

The essential upgrade

If your Acorn computer does not already have a CD-ROM drive, now is the time to buy one. Not content with bringing you the first CD-ROM on the cover of an Acorn magazine, Acorn User has teamed up with three CD-ROM drive suppliers to offer you a range of unbeatable CD-ROM drive bargains. Whatever your machine, there is something for you here. All drives offered are double-speed, multi-session drives, with Photo CD capability.

The Cumana Indigo drive

The Cumana Indigo drive is specially tailored for Risc PC owners. It fits inside the 5.25in expansion slot and connects to the IDE hard disc controller – no extra expansion cards are required.

- The most popular Risc PC CD-ROM drive.
- Comes bundled with *SpeedyCD* software (normal price £17.50 + VAT)
- Upgradeable with audio mixer board and *ProArt2 CD* painting software (contact Cumana (01483) 503 121) for details).

Normal price: £233.83 inc VAT
Offer Price: £149 inc VAT

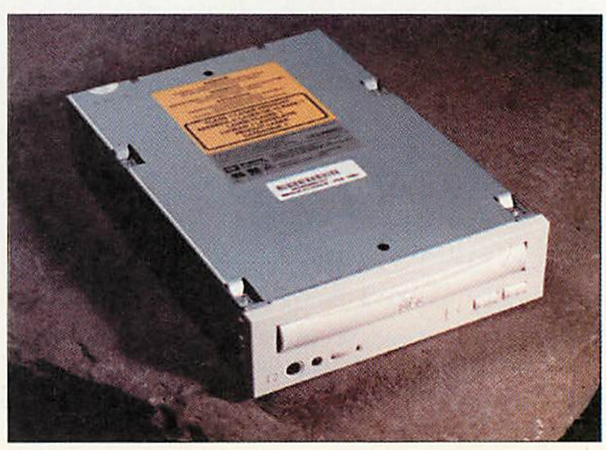


VTi/SONY Risc PC internal drive

This cheap and easy-to-fit drive connects to the IDE connector in the Risc PC and fits snugly in the 5.25in expansion slot in the front of the machine.

- Cheap all-in-one solution for Risc PC owners.
- No expansion cards needed.

Normal price: £195.83 inc VAT
Offer price: £139 inc VAT



Cumana Oscar drive

This external CD-ROM drive connects to the parallel port of an A5000, A4, A3020, A4000 and Risc PC, an elegant solution which leaves all the expansion slots on these machines free.

- Excellent portability – simply unplug from one machine and plug into another.
- Leaves A3020 and A4000 machines free for further expansion.
- Spare connector for dongles and printer – your printer port is still usable.

Normal price: £292.58 inc VAT
Offer price: £199 inc VAT





VTi/SONY SCSI drive

This top-of-the-range CD-ROM drive comes with a 16-bit fast SCSI card with User Port (and socket for MIDI/sampler card in the A3000/A4000 series card). It is an external drive and fits all models except the A4. The supplied SCSI card can be used to further expand your machine with hard drives, scanners and so on.

- Fits all machines except the A4.
- SCSI card allows for further expansion.
- SONY CD-ROM drive.

Normal price: £475.48 inc VAT
Offer Price: £299 inc VAT

Morley Revolution

This external CD-ROM drive comes with a dedicated SLCD (Single Low Cost Drive) interface card. Versions of this card will fit any Archimedes computer except the A4, including the A300 and A400 series and the A540, for which the Cumana Oscar drive is not suitable.

- Dedicated expansion card.
- Suits practically all machines.
- Eject system is software-lockable.

Normal price: £351.33 inc VAT
Offer price: £199 inc VAT



ORDER FORM

Please rush me an *Acorn User* special offer CD-ROM drive as follows: *(Please tick box)*

- ☐ VTi/SONY Risc PC internal..£139
- ☐ Cumana Indigo £149
- ☐ Cumana Oscar....................£199
- ☐ Morley Revolution £199
- ☐ VTi/SONY SCSI.................£299

My computer is a ....

I enclose total payment of £..........................

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Expiry date: /

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Name:..

Address: ....

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....Postcode: ....

Daytime phone number:..

Send your completed form and payment to: Acorn User, CD-ROM drive offer, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. All prices include postage, packing and VAT. Please allow 28 days for delivery from when we receive your order.To qualify, all orders must be received by the end of May. E&OE.

Questions & answers

PC CD-ROMs with the co-processor in the Risc PC and high-resolution monitors for DTP work.

Q I am writing to you with several questions about Acorn's new Risc PC. I have recently purchased a new 5Mb machine, and am in general very pleased with it. However, I have some questions relating to the PC co-processor card, which I hope to add to the machine in the near future.

My main concerns are about the sound capabilities of the Risc PC. In normal PCs, if sound is required then it is possible to fit a Soundblaster or similar card to the computer, but the Risc PC – like many other Acorn machines – comes already fitted with 8-bit sound capability.

If I were to fit a co-processor card to the Risc PC then would it be able to talk to the internal sound system, or would I have to wait until a suitable adaptor was released and add a PC sound card to the machine?

Alternatively, I have heard about a 16-bit audio card designed for the Risc PC which could be fitted. If I were to do this then would it support the PC co-processor and PC software requiring a sound card?

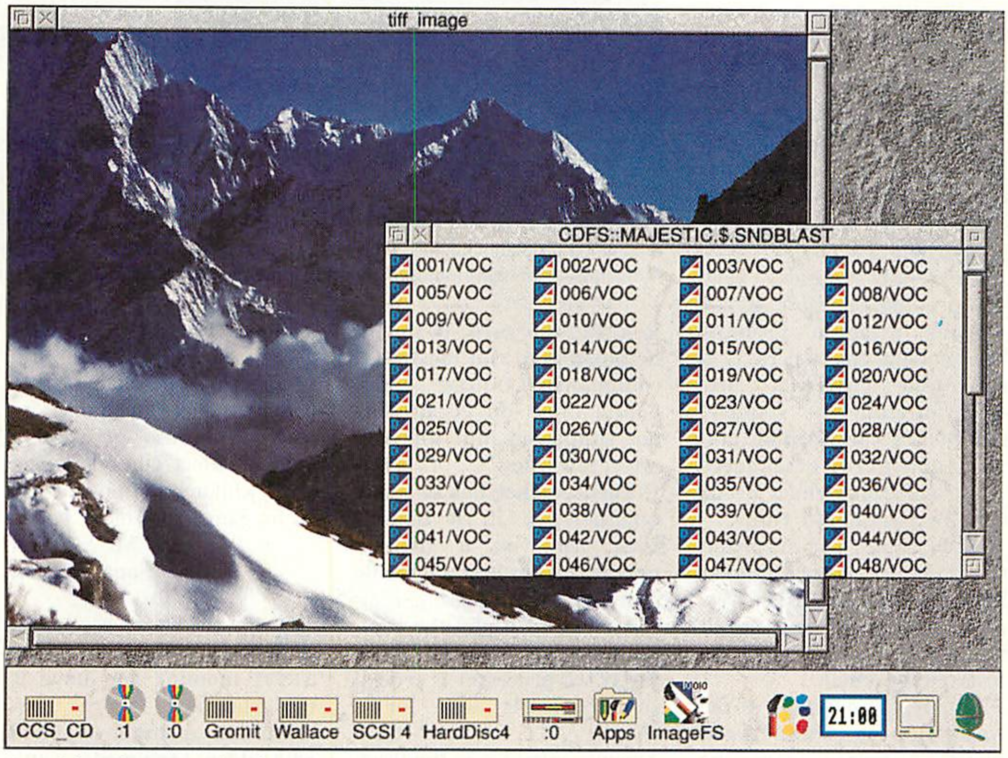
I plan to use my Risc PC with a Cumana 300i CD-ROM drive, and would like to access the wide variety of Multimedia PC compact discs which are currently available on the market. However, since nearly all of these require a sound card, I am unsure about what to do.

I have heard that the Risc PC's internal sound system is an 8-bit system. However, if possible I would like to use a 16-bit or even 32-bit (Soundblaster AWE) sound card, with direct-to-disc recording and playback facilities. If I fitted a PC sound card, would it be able to access the Cumana drive, and if so, which interface would it need to have?

My final question is about the *Corel Draw* compact disc. I would like to use this on a Risc PC, in conjunction with *ArtWorks* from Computer Concepts, but I want to know if it is compatible with the computer. I would obviously not want to spend a lot of money on something which did not work.

I would be very grateful for any help you may be able to give me.

David J M Pygott
Sherburn-in-Elmet



One of the *Discovery* series of multimedia PC CD-ROMs. Currently much of the disc can be accessed from RISC OS by using *MMViewer* from Desktop Laminations, though not the Soundblaster files nor the animations as yet. With the 486 co-processor for the Risc PC and a 16-bit Minnie sound card, the whole disc should be accessible.

A Risc PC owners wanting to get Soundblaster-quality sound from the 486 co-processor have two choices, neither of which is strictly speaking available at the time of writing, but then nor is the 486 card.

April should see the completion of Acorn's Soundblaster emulation software which, along with the 16-bit Minnie sound card for the Risc PC, will provide Soundblaster-quality output, notably from PC CD-ROMs. Therefore you will certainly need the 16-bit sound card for this solution, and also some Acorn software which should be ready by the time the card is released.

The second solution is to use the ISAdaptor from Atomwide, a prototype of which was being demonstrated at the BETT '95 show in January. This will enable PC expansion cards to be fitted to a Risc PC: these will be accessible both from the

PC card *and* from RISC OS, meaning that a Soundblaster card will be able to be driven as-native from PC applications, including PC CD-ROMs. A release date from the ISAdaptor has not been set at the time of writing – nor has a price, but it is likely to sell between £200 and £300.

As for which CD-ROMs will work and which won't, the statement from Acorn is as follows:†

'With the addition of a double-speed CD-ROM drive and a 16-bit sound card, the Risc PC/486 card combination will meet all the requirements of the MPC II specification with the exception of the sound input capabilities, mixing and joystick support.

'With the fitting of a CD-ROM drive, PC-format CD-ROM discs can be run successfully. Both IDE and SCSI CD-ROM drives are fully supported.'

This all sounds very encouraging, doesn't it? A niggling cynicism prompts the thought that there is a significant difference between meeting the requirements of a specification and being able to run every piece of PC software which needs that specification to run.

Then comes the suspicion that it is one thing supporting both SCSI and IDE *drives*, quite another supporting all the *discs* which might be inserted into them.

Finally, the omission of the word 'all' – or even the word 'most' – from before the phrase '...PC-format CD-ROM discs can be run successfully' will set alarm bells ringing in the minds of those used to the usual meaning of the phrase 'PC-compatible.'

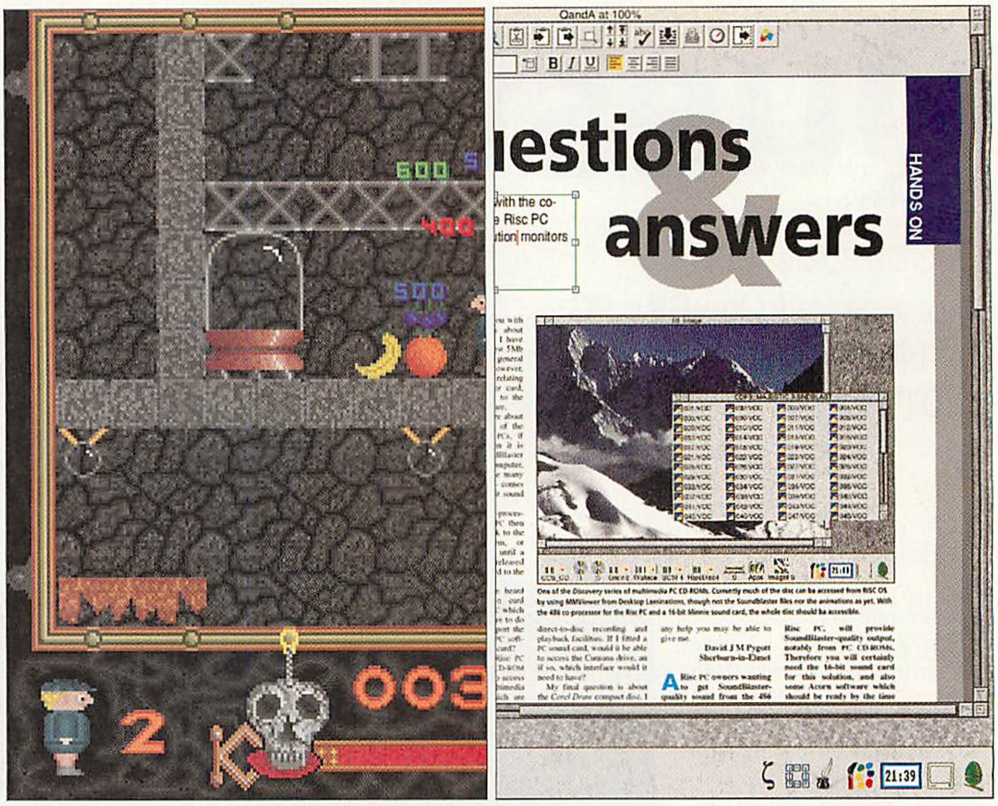
Clearly, Acorn agrees, because earlier in the same document, the following more cautious paragraph appears:

'In general, with the Risc PC 16-bit sound card upgrade installed, together with the Soundblaster emulation software, as well as the Risc PC 486 card, it should be possible to run most MPC compliant CD-ROM titles. Sound input on PC titles is not supported, but this will affect few titles.'

This sentence has so many qualifiers in it, it doesn't even rate as a definite maybe. It is at best a possible perhaps.

Anyone to whom the compatibility of CD-ROMs with the PC co-processor is crucial should clearly wait for a couple of months until Acorn's software is finalised. This goes double for anyone who needs the sound capabilities of a PC CD-ROM as some features of these will clearly not be supported.

† Source: the *Risc PC 486 card Q and A document* given by Acorn to journalists at the launch of the 486 card.



A common problem: the need for a large screen mode for DTP work and a low-resolution one for playing games. Most non-Acorn high-resolution monitors can't cope with the 'CGA' Acorn modes that many older games run in.

Q Please can you help me. I've got an Archimedes A310 with the following hardware configuration: 4Mb RAM, ARM3, 46Mb SCSI hard disc, RISC OS 3.1 and AKF11 monitor.

My request for help is with regard to monitors. I do a lot of DTP with my computer and feel it is time to upgrade my monitor to SVGA, multiscan, or VGA or such like. Please can you advise me upon suitable upgrades as I'm not sure of the upgrade I need. As I've said, I do a lot of DTP and I find it a strain using anti-aliased fonts with my standard monitor.

Does the use of such a monitor affect other software, as my children use my computer for games and so on?

Mr N C Gill
Southampton

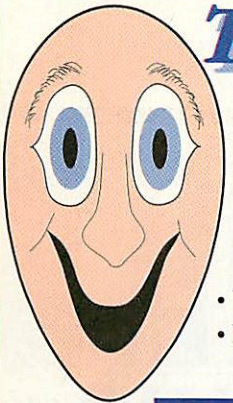
A Firstly, let me sort out a few standards. The AKF11 monitor you have is the standard Acorn low-resolution monitor supplied with older Archimedes computers, commonly referred to as CGA. VGA and SVGA are higher resolution standards. To get SVGA-standard modes with an A310 requires a VIDC enhancer which enables the VIDC video chip to run at 36MHz rather than 24MHz. Multiscan monitors can display a range of scan rates, taking their signal from the computer. You will not need a VIDC enhancer to use one of these monitors, although it will help.

Another option is to buy a graphics expansion card such as the Colour Card Gold from Computer Concepts. These allows large modes (up to 1600 pixels across) at higher refresh rates, with up to 32,000 colours. The Colour Card Gold will also display standard Acorn games modes. The down side of this is cost – the card retails at just under £300 all inclusive – but if you are serious about DTP work you should certainly consider it.

Having got the enhanced graphics output, you will want a monitor to display it. *Acorn User* last did a monitor round-up in its March 1994 issue, and the general conclusion from this was that few high-resolution monitors could display lower-resolution modes which many older games need to work.

All Acorn-branded monitors, up to and including the excellent 17in AKF85, can display these modes. Some Taxan monitors can too. The best advice is to try a particular monitor with your computer before committing yourself to buying it. If you do buy an Acorn monitor, steer clear of the obsolete and infamous AKF18, Acorn's first multiscan monitor.

You will also need an adaptor to connect the monitor lead to the A310, which most dealers sell. AU



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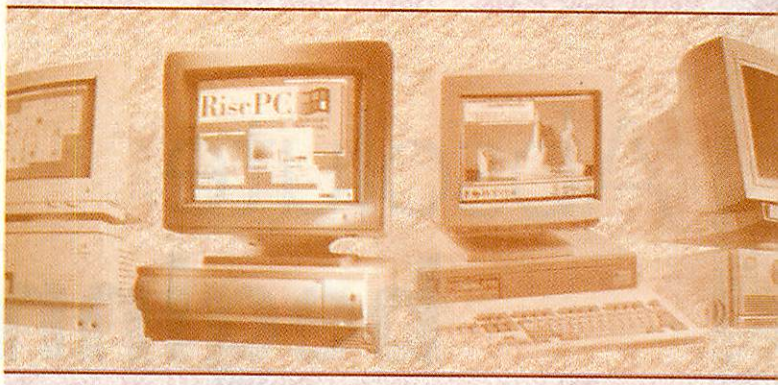
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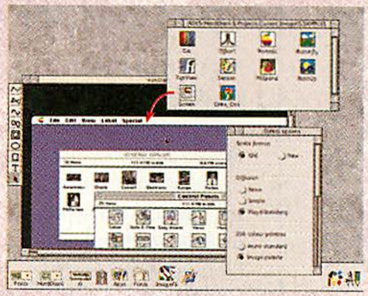
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Education Site-Licence version: £75.00

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ImageFS is a revolutionary new piece of software for Acorn RiscOS computers. It converts graphics from other computers into Sprite graphics that can be loaded by almost all RiscOS applications.

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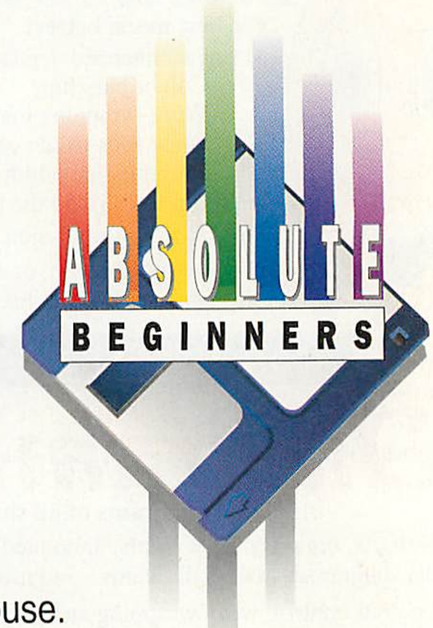
Requires RiscOS 3.1 or above

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Absolute beginners



Acorn User's series for beginners returns. In the first of a set of articles designed to help you get started on your Archimedes, David Matthewman introduces you to your mouse.

When I was considering this series, the first article was going to be about unpacking your computer – explaining what the various bits were and how they all fitted together. Then I changed my mind, for a number of reasons. Firstly, I doubted I could significantly improve upon the instructions given in the manual that comes with the computer, at least not in two pages of the magazine. Secondly, all the models of Archimedes are different, and I would have to repeat myself many times over. Thirdly – and most importantly – anyone who hasn't got their computer switched on and displaying some sort of picture within a day of buying it won't have the patience to sit down and read an article in a magazine – they'll be hammering on the door of whoever they bought it from.

For these reasons, the first article in the series will be concerned with a feature common to all Archimedes machines running RISC OS, and one which is fundamental to the operation of the machine: the mouse.

Basic mouse operation

Moving the mouse moves the pointer on screen, as I expect you've noticed. This sort of control should be highly intuitive and easy to get used to – remember to watch the screen and not the mouse. The mouse on the Archimedes has three buttons which have different functions. Their basic functions are accessed by 'clicking' the button; pressing it once and

Tutorial using the cover disc

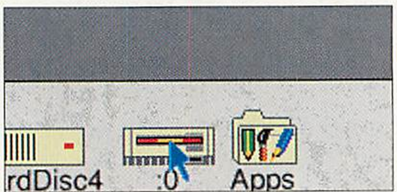
1) Place the cover disc in the drive on your computer and switch the computer on. Wait for the computer to enter the Desktop. Move the pointer over the floppy disc icon on the icon bar (see diagram) and click with Select (left-hand mouse button.

2) A window should open showing the disc contents. Move the pointer to it and click *once* with Select on one of the files in the window – it should become highlighted (see diagram). Practice clicking once with Select on other files to highlight them, and also clicking once with Adjust to highlight multiple files.

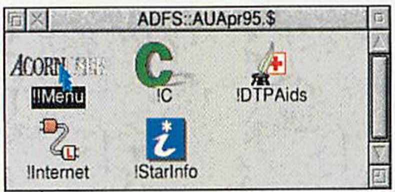
3) Move the pointer to the *!!Menu* file and double-click on it with Select. The LED on the machine next to the disc drive will flash and the *Acorn User* disc menu program will load. Its icon will appear on the icon bar at the bottom of the screen.

4) Move the pointer to the *Acorn User* menu icon on the icon bar. Click with Menu, and a menu will appear (see diagram). Move the pointer over the 'Quit' entry in the menu and click again (any button). The program will exit and be removed from the icon bar.

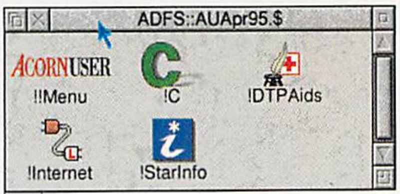
5) Go back to the window showing the disc contents. Position the pointer over the title bar of the window (see diagram) and drag with Select held down. The window can be moved around the screen.



1

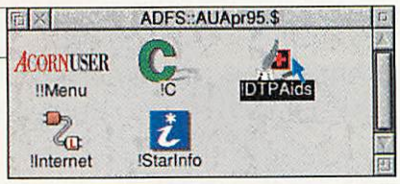


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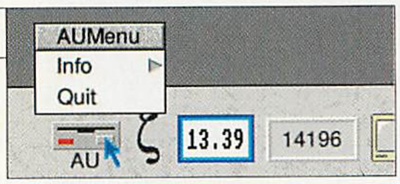


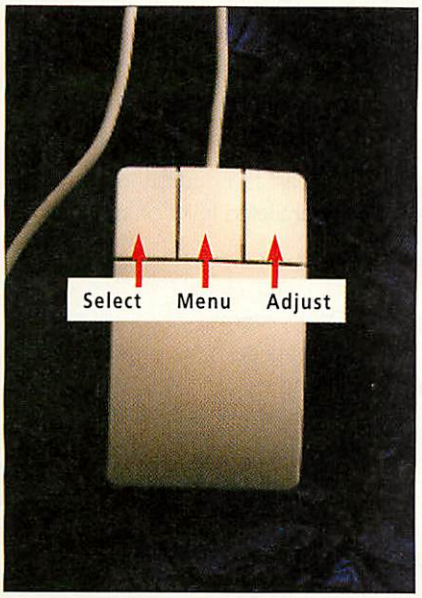
5

2



4





immediately releasing it. You will often find that clicking twice with a button, pressing the button but not releasing it at once, or pressing a button with a key held down on the keyboard will have a different effect again.

This sounds complicated, but is made easier by the fact that most programs you can buy for the Archimedes react to the different button clicks in consistent ways. This makes the various type of button-click easier to learn.

The middle mouse button is in many ways the easiest to understand. When clicked a menu is opened underneath the pointer. This menu is appropriate to whatever the pointer was over at the time; if it was over a file a menu will open allowing you to perform operations on the file. We will look at menus in more detail later in the series, but they are fairly intuitive. The middle mouse button is usually called the Menu button – documentation usually refers to 'clicking with Menu' – and its behaviour rarely changes. Double-clicking, clicking with other keys held down and so on does not change the behaviour of Menu, except in certain programs which will always warn you about this. Note that in some areas of the screen, clicking with Menu will do nothing as there is no appropriate menu to display.

The left-hand mouse button is usually called the Select button, as its general use is for 'selecting' things. If you want to open, close or re-size a window, change a setting in an options box, position the caret (the line or block that tells you where you are in a text document) or highlight a file on a disc, this is the button to use.

The right-hand mouse button is usually called the Adjust button. Its uses are similar to Select, but in general its effect is different in some (often subtle) way. It can be thought of as a 'modified Select' button. This can be hard to get the hang of – the best way to learn is through practice. For instance, when highlighting a file using Select, all other files are de-selected. Using Adjust, the file is *added* to the list of highlighted files.

Double-clicking

Clicking a mouse button twice in quick succession is called double-clicking. Double-clicking with Select or Adjust often has a different effect from single-clicking. For instance, whereas clicking once on a file will highlight it, double-clicking will run the file. Clicking once in a word-processor will position the caret, double-clicking will highlight a word.

As with the difference between Adjust and Select, this becomes easier to learn with practice. The important thing for the moment is to realise that single-clicking and double-clicking are treated as different operations by programs, and that where a manual asks for a double-click it means two clicks in quick succession, not several seconds apart.

Dragging

If a mouse button is pressed and not released immediately, or the mouse is moved while a button is pressed, the button is said to have been *dragged*. Drags are frequently used to move things – files, windows, text – or to highlight a group of objects. Generally speaking their use is intuitive, but it is important to remember to keep the mouse button pressed during the drag, as the drag ends when the button is released, not when the mouse stops moving. AU

Are you in the Desktop?

The *Desktop* is the name given to the standard display on the Archimedes which usually appears after you have switched the machine on, though you may have to wait a minute or so for the computer to set itself up first. It should look something like figure one. A detailed description of the Desktop will appear next issue: currently the important thing is that the text in this article assumes your computer is displaying the Desktop.

There are several reasons why it might not be displaying the Desktop. You might be running a program which temporarily takes over the whole display, in which case you will usually return to the Desktop once the program has finished. Alternatively, you might have left the Desktop temporarily by pressing F12, in which case you will see a white bar across the bottom of the screen with a * prompt at which you will be able to type (see figure two). If this is the case, entering a blank line by pressing Return once should re-enter the Desktop. You might also have quit the Desktop completely, in which case typing:

```
*desktop
```

will return you to the Desktop. Depending upon your machine's configuration, you *may* need to type this after you switch on, but this is unlikely.

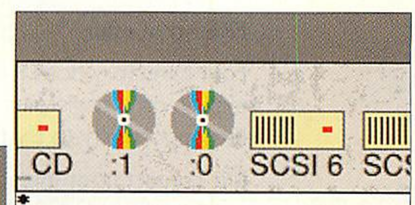


Figure two: leaving the Desktop temporarily by pressing F12.

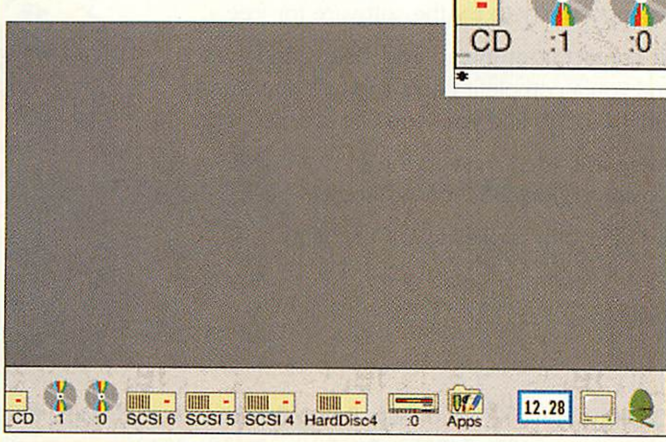


Figure one: the RISC OS Desktop.

F ont Directory is the only font management application which contains a dedicated font filing system. All other programs work by simply swapping whole directories or moving font files from one folder into another.

Although writing and desiging a font filing system has taken more time and effort, it offers some additional benefits...

- **More flexibility** – Individual fonts (not just families or directories) can be installed and removed. You can also organise your fonts into categories, families and weights.
- **Saves space** – By using directories which only take up 2K, the space used by your font collection can be reduced.
- **Kind to discs** – Unlike some systems, font availability is controlled in memory and not by moving font files on the disc. This saves a lot of unnecessary disc access and speeds up the availability of your fonts.
- **No limits** – Well, not exactly... you can store over 5900 font families! And you can make many of these fonts available at any one time – typically over 700 font families.
- **Network friendly** – A special version of the software is available for network users. This allows each station to have a personal view of a central collection of fonts stored on a file server.
- **Star commands** – If required, star commands are provided to allow you to specify which fonts should be made available.
- **RISC OS compliant** – It works with both RISC OS 2 & 3 and is desktop compliant. As registered developers, the calls and messages provided are officially recognised by Acorn.
- **Well documented** – It comes with a 32-page printed manual which includes both a primer and a detailed description of the facilities provided.
- **Reviewed** – Here's what the reviewers say:

RISC User, Jan/Feb '94: *"This program provides the kind of facilities which should have been built into the operating system in the first place. It is very easy to use, and I find it utterly invaluable. Anyone who has more than a handful of fonts should buy it without delay. It is superbly presented, operates flawlessly, and has become a permanent addition to my iconbar."*

Archive, Sept '93: *"The real pièce de résistance is the facility to scan documents and files and install the fonts required automatically. This is a dream to use. I have always found it frustrating that Impression would simply replace all uninstalled fonts with Trinity without even giving the option to abort loading the document. Draw would replace unrecognised fonts with the system font. Now that is all a thing of the past.*

I was very happy with Font Directory. I found it very easy to install and use with minimal reference to the manual... this is a highly intuitive application – a great deal of care and thought must have gone into its design and realisation. It integrates seamlessly with RISC OS and if you use a lot of fonts, you have to have Font Directory."

LOOK systems

Font Directory

A font filing system

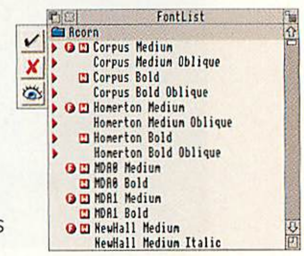
Hundreds of outline fonts are now available for the Archimedes and new fonts are being produced all the time. This is all very well, but it does mean that using and managing fonts is becoming increasingly difficult.

What is Font Directory?

Font Directory is a radical approach to storing and using outline fonts within the RISC OS desktop. At its heart is a dedicated font filing system which provides the user with an unparalleled level of control.

Easy-to-use

Using techniques pioneered by LOOKsystems, Font Directory allows you to install fonts at the click of a button without the having to restart your application.

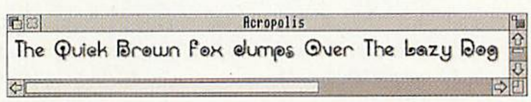


Just select the fonts in the FontList window and click on the 'tick' icon.

(If you wish, you can specify which fonts will be available on start-up and save favourite lists of fonts for later use.)

Font viewer

A preview window is available to help you decide which fonts you wish to install or just to remind you what a particular font looks like. If required, the text, size and colours used to display a font can be defined and even saved for later use.



Document scanning



The most powerful feature, however, has to be the ability to scan other applications' documents. When a document is dropped onto Font Directory, the fonts used will be made instantly available.

At last, no more 'font not found' errors!

FREE trial offer

TRY BEFORE YOU BUY

Font Directory does a lot more than we can explain on a single page and so we are offering you the opportunity to try the software for free.

Just contact us at the address below and we will send you a complete pack. This can be returned within 10 days and you won't be charged a penny.

Otherwise, you can keep the software and we will invoice you for £35 inc VAT and UK P&P.

This offer only applies to UK residents.

LOOKsystems, 47 Goodhale Road, Bowthorpe, Norwich, NR5 9AY.
Telephone: (0603) 748253. Facsimile: (0603) 764011.

A hard disc is recommended and you will need enough space to store all of your fonts. Most major applications and file formats are supported.

Acorn Customer hotline

Essential information for all Acorn users, compiled by Dave Walker of Acorn Customer Services exclusively for Acorn User.

Questions and Answers

Q. I want to connect to the Internet; what do I do?

A. First, you need a communication line in to the Internet itself. A number of companies around the UK have set themselves up as 'service providers;' that is, they have purchased a high-bandwidth Internet feed and the commodity they sell is the facility for subscribers to connect into their feed. The means of connecting is usually by a modem and dial-up telephone line (see later for details of modems), although if you have a large installed base of machines at your site you wish to connect, and you will be making use of many services which consume high bandwidth (such as World Wide Web), service providers may suggest ISDN or a leased line as a higher-speed alternative connection mechanism.

Finally, you need communications software which is capable of supporting a TCP/IP stack, and if you are using a dial-up link, either SLIP or PPP; these protocols put headers and footers around the IP frames to render them suitable for sending down a serial link. If you wish to use more advanced facilities than just e-mail and remote login capability, you will need software which handles the specific protocols for such services and which sit on top of TCP/IP; nntp for USENET newsgroup access, http for the full facility of World Wide Web, etc.

Suitable SLIP software will be appearing on the *Acorn User* cover disc over the next few issues – see the cover disc pages for more details.

Modems in all shapes and sizes

If you are considering buying a modem, you will run into lots of specifications of the form V.nn, where nn is a two-digit number. These specifications refer to data communication speeds and occasionally data compression methods; detailed descriptions of the most common numbers follow:

- V.27
Specifies 4800 bps communications requiring two wires for half duplex and four wires for full duplex operation. The standards specify Quadrature Amplitude Modulation (QAM) at 1600 baud. The Group 3 Fax standard references V.27 as the base requirement for 2-wire half duplex fax communications.

- V.32 CCITT
Standard for 9600 bps full duplex modems. Specifies 2-wire full duplex 9600 bps communications using QAM modulation at 2400 baud and echo cancellation. V.32 modems offer an upgrade path from V.22 bis for asynchronous dial-up modem applications.

- V.32 AUTOMODE
Was recently published as an annex to V.32, and defines an automatic fall-back capability which does not support 9600 bps communications.

- V.34
The current state of the art in serial communications over the telephone, V.34 specifies full duplex 28800 bps.

- V.42
Specifies error correction techniques which can be implemented in modems independently of transmission speed and modulation system. This includes LAPM (Link Access Procedures for Modems) and MNP (Microcom Networking Protocol) 2 to 4 error correction.

- V.42 bis
This specifies compression algorithms which can be implemented in modems independently of transmission speed and modulation system. V.42 bis provides a 4:1 compression ratio, using the Lempel-Ziv algorithm.

When is C++ not C++?

When it's *CFront* front-ending onto a C compiler. *CFront,* included in Acorn *Desktop C/C++* Release 5, is a tried, tested and established translation engine which takes C++ source code and translates class objects etc. at source level into the appropriate structure and redirection paradigms in C. The C which results is compliant with the ANSI C standard, however it is not necessarily comprehensible to a programmer.

Enhanced font handling in RISC OS 3.5

One of the most obvious changes in the appearance of the Desktop between RISC OS 3.1 and RISC OS 3.5 is the use of outline fonts on the icon bar, in filer windows and in application menus. As well as using the *Configure* application in the RISC OS 3.5 Boot hierarchy, the Desktop font can be changed using:

```
*CONFIGURE DESKFONT <font name>
```

once the relevant *!Fonts* directory has been 'seen' by the filer.

Implementing outlined, kerned fonts on the icon bar and especially in menus is an interesting task for the programmer who chooses to build his interface manually (instead of using a tool such as *ResEd*, included with *Desktop C* Release 5); use of *ResEd* for this kind of task is recommended.

```
SWI"Wimp_TextOp"
```

detailed in Volume 5 of the RISC OS 3 Programmer's Reference Manual can calibrate the widths of text-containing menus to accommodate font changes, and for each line of a menu the text following the final space can be right-aligned. AU

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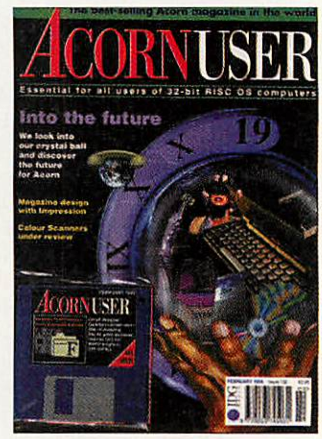
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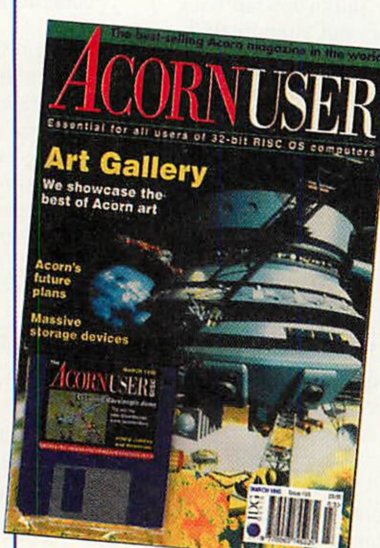
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C for yourself

Steve Mumford takes a look at how C handles the processes of decision and iteration.

Up to this point, the flow of the programs in this series has been somewhat linear and the computer has not had to make many decisions on the route it takes through the code – execution starts with the first line in main() and continues until the program terminates. However, this rigidity is unacceptable in all but the most basic of programs, and techniques are needed which allow the flow of the program to be altered. In this article, I will be describing the ways in which you can interrupt the stream of the program to allow conditional execution of program segments to take place. After that, I'll move on to mention the forms of loop available in C.

Decisions, decisions

The simplest form of decision is the if statement and it takes the form shown below:

```
if (condition) {
/* some statements */
}
```

The statements contained within the braces are only executed if the condition evaluates as being true – otherwise, the computer simply skips over them and continues execution wherever the if construction finishes. Greater flexibility is provided by the else keyword, allowing you to chain several if statements together, providing a method of making multi-choice decisions.

```
if (guess == number) {
printf("You are correct!\n");
} else if ((guess > number-5) && (guess <
number+5)) {
printf("Well, you were close.\n");
} else {
printf("Sorry, that's not right.\n");
}
```

The switch statement

Although you can use these chained ifs to make a choice from a long list of possibilities, C has a different construction to make your life that bit easier:

```
switch(x) {
case 1:
printf("x = 1\n");
break;
case 2:
printf("x = 2\n");
break;
default:
printf("x does not equal 1 or 2\n");
break;
}
```

This code fragment examines the value of the integer x and then makes the comparisons given in the block – if x is equal to a constant included after a case statement, the program begins execution at that point and continues until it reaches a break statement or the end of the switch block.

The statements after the default keyword are executed if none of the case constants match the value given after the switch command. This feature makes the switch construction particularly useful for creating menu systems – after the user has picked an option from the menu, it can be checked against a list of possibilities and the

appropriate action taken. If the user happens to enter an option that is not supported by the menu, the default action is taken, and this might be to inform the user to make another choice.

The break statement is particularly important here, as once a case has been found that matches the switch expression, the program will begin execution at that point and will ignore any following case comparisons, continuing execution until the next break. Although this can be useful in a few cases, after you've spent a good while implementing your menu structure, it's somewhat demoralising to find that the computer is executing most of the options regardless of your choice.

There are a couple of restrictions on the switch construction – firstly, it can only test for integers (and characters, since those are actually stored as an integer). Secondly, you must not include two case constants with the same value in the same switch.

The 'for' loop

There are several forms of loop available in C, and we'll start by examining the for loop. It's somewhat different to the one implemented in BASIC in that instead of stepping between two constants, it keeps iterating while a suitable condition is met:

```
for(initialisation; loop condition ;
increment) {
/* statements to be repeated */
}
```

The initialisation is usually something simple like x=0 which prepares the variable to be used as the looping flag. However, you must still remember to declare the variable earlier in the program. The loop will continue repeating while the condition given in the middle of the for statement is true – this might be x<=5. Finally, the increment statement is applied to the flag on each successive loop, and in this case it could be x++. Putting this together would give a loop similar to the following:

```
for (x = 0; x <= 5; x++) {
printf("The value of x is %d\n",x);
}
```

This fragment would loop six times, printing out the numbers 0 to 5 on the screen. This is a somewhat contrived example, and the for loop can be used for more creative tasks – for instance, an infinite loop can be constructed by leaving all three fields blank, and the only way to escape from such a loop is by using the break command.

The 'while' loop

The for loop is generally used when the programmer knows what the start and end conditions are in advance – however, this is not always possible so another, more general form is needed, and this is known as the while loop. There are two closely-related forms which test for the end condition at different times in the cycle, and we'll start with the simpler version:

```
while (condition) {
/* statements to be repeated */
}
```

The statements are repeated while the condition given at the top of the loop is true, but it's important to see that since the comparison is made at the head of the structure, the statements in the loop will never get executed if the condition is false to begin with.

The second form is known as the do-while loop, and it looks rather similar in its construction – however, you must remember to include the semi-colon at the end of the block!

```
do {
/* statements to be repeated */
} while (condition);
```

The major difference is that the statements in the loop are *always* executed at least once, because the comparison is only made at the end of the block. If this construction feels a little familiar, that's because it's similar to REPEAT-UNTIL in BASIC, with the difference being in the way it tests for the end condition. REPEAT-UNTIL loops until a condition is met, and do-while iterates while a condition is met – they're said to be logically opposite.

Break and continue

We've already used the break command while we were discussing switch statements, but its main use is to terminate execution of a loop immediately. This might be included in a data-loading function to allow it to be stopped if the end of the file was reached unexpectedly. When the program comes across a break, it will exit from the loop it was executing at the time. If you have several nested loops, the break will only exit from the innermost one, and program execution will continue with the loop surrounding it.

C has a related command named continue – this is less severe when compared to break, and instead of exiting the loop completely, it just forces an early iteration:

```
for (x = 0; x < 15; x++) {
if (x == 13) continue;
printf("x = %d\n",x);
}
```

For the superstitious among you, this program fragment will print out the integers from 0 to 14, missing out the number 13. When the continue command is issued, it immediately skips past the rest of the statements in the loop, and returns control to the head of the block. The loop flag is incremented and the end condition tested, and if the loop is still valid it continues as normal.

The dreaded goto

I've only included this command for the sake of completeness – I learnt the error of my ways a long time ago. The goto command leads to code that's notoriously difficult to follow, and due to the way C has been written, it's actually obsolete. With that in mind, here's how you write one:

```
x = 0;
loop:
x++;
if (x < 50) goto loop;
printf("x = 50!\n");
```

To perform a goto you must have defined a label elsewhere in the program by including a valid identifier followed by a colon. In this case, the label is loop. The fragment keeps incrementing x and returning to loop until x is equal to 50. So now you know, but for the benefit of programmers everywhere, please try to avoid using it. AU

On the disc

There are four programs on the cover disc this month. They demonstrate the use of several of the constructions given in the text.

While loops are demonstrated in *dowhile* and this program implements a simple menu. The outermost loop repeats until a menu value is chosen within the given range; this is a fairly standard construction for an input function which only accepts a range of values. Because the while statement is at the end of the loop, the loop is executed at least once. The inner while loop has the test at the start of the loop and may not execute at all. It skips characters in the input buffer – ones which have been typed – until it reaches a Return character.

The *goto* program demonstrates the goto statement, and shows why you should never use it if you want someone else to follow your code. Remember, that 'someone else' could be you, a month later.

If statements and switch statements are used extensively in *numgame* which also contains an infinite loop which can only be broken out of with a break or (in this case) a return statement.

Finally, nested for loops are the order of the day with *Prime*, which prints out all the prime numbers between three and the number stored in the constant MAXNUM. To find more, change the number in the:

```
#define MAXNUM 100
```

line, and re-compile the program.

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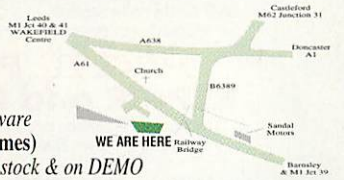
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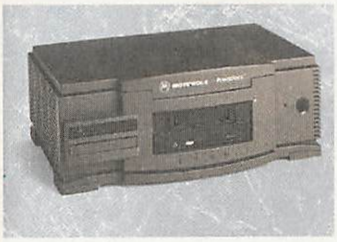
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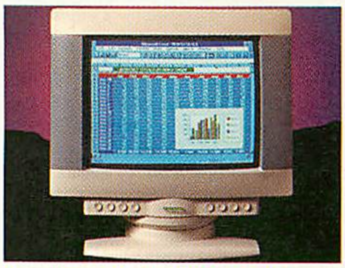
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- Single pass scanning process
- 24-bit colour and grey scale modes
- A4 scanning area (216 x 297mm)
- Connection via SCSI interface
- Imagemaster scanning software
- TWAIN driver

£849

Accessories

Document Feeders
- Auto Document Feeder – IX-4015 £249
- Auto Document Feeder – ArcScan £259
- Auto Document Feeder – ScanJet IIcx £365
- Transparency Adaptor – ScanJet IIcx £499

SCSI Interfaces
- 16-bit SCSI Interface (A300/A400) £79
- 32-bit SCSI-2 Interface (A300/A400) £159
- SCSI-2 Interface Cable £20

Software
- Spacetech Photodesk software £149
- Sleuth OCR software £40

Scan256 Hand Scanner
Scan256 is a hand-held scanner giving you up to 256 grey scales at a maximum resolution of 400 dpi, and is supported by state-of-the-art software.

- 400mm scanning width
- 256 grey scales at up to 400 dpi resolution
- Highly advanced image processing tools
- Convoluting digital filters – over 100 choices
- True brightness & contrast control
- Save image in industry standard formats
- Selectable 256 grey/monochrome modes
- Ability to shear and/or rotate images

- **Scan256 handscanner – A300/A400** £115
- **Scan256 handscanner – A3000 ext.** £125

Archimedes A4 Scanner
The Archi A4 scanner is a low cost 64 grey scale scanner with a scan width of up to A4 size. With a maximum resolution of 400 dpi. It is the ideal solution for scanning larger line art drawings. The scanner can be used as either a hand-held device or with an optional sheet feeder.

- **Archi A4 Scanner – A300/A400** £175
- **Archi A4 Scanner – A3000 external** £195
- **Sheet Feeder for A4 Scanner** £59

TO ORDER CALL OUR SALES HOTLINE 01582 745555
or FAX YOUR ORDER on 01582 488588

Hard Drives, Memory, Networking & Add-Ons

Hard Drive Upgrades

IDE Hard Drive Upgrades for A300/A400
Complete with drive, interface, mounting brackets, cables and software.

- ADA0580 365Mb 13ms £179
- ADA2030 420Mb 12ms £199
- ADA2210 540Mb 11ms £219

IDE Hard Drive Upgrades for A5000
For use as a replacement of existing drive.

- ADA0880 365Mb 13ms £119
- ADA2060 420Mb 12ms £149
- ADA2220 540Mb 11ms £159
- A5000 2nd Drive Kit £10

A3000/A3010 Internal IDE Hard Drives

- ADA0730 120Mb 19ms £179
- ADA2360 170Mb 13ms £199
- ADA2080 340Mb 11ms £249
- ADA2200 510Mb 10ms £399

A300/A400 IDE Hard Cards
Hard drive mounted on interface, complete with formatting software.

- ADA2380 170Mb 13ms £209
- ADA2090 340Mb 11ms £259
- ADA2230 510Mb 10ms £409

SCSI Hard Drive Upgrade for A300/A400
Complete with 16-bit interface, drive, cables and mounting brackets.

- ADA2310 540Mb 11ms £299
- ADA2320 1.0Gb 9ms £499
- ADA2330 2.0Gb 10ms £849

Interfaces & Accessories

- 16-bit IDE Interface - A300/A400 £39
- 8-bit IDE Interface - A3000/A3010 £49
- SCSI Interface - A300/A400 £79
- SCSI-2 Interface - A300/A400 £179
- 25way-50way SCSI round cable £15
- 50way-50way SCSI round cable £15
- 50way-50way SCSI-2 round cable £20
- 50way-50way SCSI ribbon cable £8

Memory Upgrades

Model	2Mb	4Mb	8Mb
A3000	£49	£119	£269
A3010	£59	£139	-
A3020/A4000	-	£79	-
A5000	-	£79	£269
A540/R260	-	£249	-

All 8Mb upgrades require 4Mb to be fitted already

RiscPC Additional RAM Modules

- 2Mb £79
- 4Mb £119
- 8Mb £259
- 16Mb £399
- 32Mb £poa
- 64Mb £poa
- 1Mb VRAM £99
- 2Mb VRAM £159

RISC OS Upgrades

- RISC OS 3.1 Single User Upgrade £73
- RISC OS 3.1 Hardware Kit £21
- RISC OS 3.1 Bulk Software Pack £319

Fax/Modems

- Aries XLink XL144e Fax Modem £119
  Complete with cable & ArcFax software
- US Robotics Sportster 14.4 £159
  Complete with cable & ArcFax software

Graphic/Sound Cards

- Colour Card Gold £239
- Chroma 500 Genlock Card £419
- Chroma 150 PAL Encoder £169
- Chroma Genlock Card £209
- Hawk V9 MKII Digitiser £189
- Eagle M2 Multimedia Card £319
- Vision24 254-line Colour Digitiser £99
- Vision24 508-line Colour Digitiser £139
- CC TV Tuner Card £89
- CC TV Tuner Card & Teletext £159
- CC Movie Magic MPEG Card £249
- Scanlight Video 256 £199
- Multiscan VIDC Enhancer £15
- SuperVGA VIDC Enhancer £29
- RiscPC 16-Bit Sound Card £59

WHILE STOCKS LAST

25MHz ARM3 Turbo Card



Using the latest surface mount technology on a high quality 4 layer PCB, the ARM3 Turbo Card will increase the speed of your A300, A400 or A3000 computer by up to 6 times.

The upgrade can be fitted by the user in A300 and A400 machines, but for owners of the A3000 we can collect, fit and deliver your computer back for an additional £35.

Owners of A300 and old A440 models will require a MEMC1A upgrade to use the ARM3.

Buy ARM3 Turbo Card and RISC OS 3.1 Upgrade for only £179

Special Offer Price £149

Ultimate Expansion

Need an internal hard disk drive and a user port on your A3000 or A3010, then look no further. The Ultimate Expansion System from HCCS is an internal podule with a user port as standard. Space is provided for a 2.5" IDE hard disk drive and three micro-podule slots are also provided for future expansion.

- Ultimate Expansion Interface £39
- Ultimate Expansion Interface & IDE £99
- Ultimate Expansion with 170Mb drive £259
- Ultimate Expansion with 340Mb drive £299

Micro-Podule for Ultimate Expansion

- SCSI Interface £69
- Vision Colour Digitiser £69
- ScanLight 256 £229
- MIDI Interface £49
- Analogue Interface £29

I/O Expansion Cards

- A3000 User Port/Analogue Card £19
- A3000 User Port/MIDI Card £44
- I/O Podule - User/Analogue/1MHz £79
- A300/A400 User/Analogue Card £25

Miscellaneous Add-ons

- 4way Backplane - A300 series £22
- Archimedes Fan £8
- A3000 Serial Port Upgrade (AKA18) £19
- Arc to BBC Serial Link £15
- MEMC1A Upgrade £25
- Floating Point Accelerator - A5000 £99
- ArcLaser A4 1200dpi Laser Printer £985
- ScanLight 256 - A3000 Internal £199

2010 Concept Keyboard

- A4 Universal 2010 Concept Keyboard £99
- A3 Universal 2010 Concept Keyboard £109
- 2010 BBC User Port Cable £12
- 2010 Archimedes Serial Port Cable £12
- Concept Keyboard Designer software £20

Accessories

Dustcovers & Carry Cases

- A3000 Keyboard cover £5
- A3000 Keyboard & Monitor cover £9
- A300/A400 Micro & Monitor cover £9
- A5000 Micro & Monitor cover £9
- 14" Monitor cover £6
- A3000/A3010 Carry Case £10
- A4 Notebook Carry Case £35

Mice & Joysticks

- Archimedes Mk4 Mouse £24
- Acorn Logitech Mouse £29
- Voltmace Delta Cat Joystick £25
- Quest Tracerball £20
- Power Pad Single Joypad £25
- Power Pad Dual Joypad £34

Miscellaneous Accessories

- A4 Notebook Battery Pack £49
- A3000 Monitor Stand (WE) £15
- A3000 Monitor Stand (Acorn) £25
- A3000 External Podule Case £10
- Archimedes Keyboard Extension Cable £5
- Archimedes Mouse Port Splitter £5

Educational Discounts
are available on most products to Schools, Colleges & Universities. Call for details.

Acorn On-Site Warranties

- 1 year A3010, A3020, A4000 (TSA36) £24
- 3 year A3010, A3020 FD (TSA33) £40
- 3 year A3020, A4000 HD (TSA34) £50
- 3 year A4 Notebook (TSA41) £125
- 3 year RiscPC 600 £POA

Networking Products

Acorn Ethernet Products

- Ethernet Interface III - A5000 £149
- Ethernet Interface - RiscPC £99

Acorn Access Peer to Peer Networking

- Acorn Access - A3000 £145
- Acorn Access - A3020/A4000 £145
- Acorn Access - A5000 £145
- Acorn Access - RiscPC £119

I-Cubed Ethernet Products

- EtherLan 102 - A3000/A3010 £129
- EtherLan 202 - A3020/A4000 £136
- EtherLan 502 - A300/A400/A5000 £129
- EtherLan 602 - RiscPC 600 £109

I-Cubed AccessFlash Network

- AccessFlash 100 - A3000/A3010 £149
- AccessFlash 200 - A3020/A4000 £159
- AccessFlash 500 - A300/A400/A5000 £149
- AccessFlash 600 - RiscPC 600 £139

Ethernet Hubs

- Aries EH-8 8 port Ethernet Hub £179
- Aries EH-12 12 port Ethernet Hub £259
- Aries EH-16 16 port Ethernet Hub £329

Ethernet Cabling

Cable length	Thinnet	UTP
3m	£5	£3
5m	£6	£5
10m	£9	£8
15m	£12	£10
20m	£17	£14

Ethernet Accessories

- BNC Terminators £1.25
- BNC In-line coupler £1.55
- BNC T-connector £2.00

Networking Software/Documentation

- AUN/Level 4 Fileserver Rel.3 £359
- TCP/IP Protocol Suite - single user £99
- TCP/IP Protocol Suite - site licence £399
- Level 4 Manager's Guide £19
- AUN Manager's Guide £19

PC Cards

Transform your Archimedes so you can run standard PC DOS or Windows based software with the Aleph One range of PC cards. Two models are available - 486SLC25 for general purpose applications or a 486SLC2-50 for greater performance.

Both versions come with interface connectors for a local IDE hard disk, a parallel printer port, serial port and there is also a socket provided for an optional maths co-processor. A single SIMM socket is provided and will accept RAM up to a maximum of 16Mb.

- 486 SLC25 PC Card - no RAM £349
- 486 SLC25 PC Card - 4Mb RAM £469
- 486 SLC2-50 PC Card - no RAM £429
- 486 SLC2-50 PC Card - 4Mb RAM £549
- 8Mb SIMM RAM for above £259
- 16Mb SIMM RAM for above £399
- 486SX33 PC Card - RiscPC 600 £199
- MS-DOS 6.2 & Windows 3.1 £89

Archimedes Spares

- A300/A400/A5000 Cased Keyboard £99
- A3000/A3010/A3020 Keyboard £29
- A4000 Cased Keyboard £79
- Arc Mk2 Keyboard Controller PCB £49
- A300/A400 Power Supply £59
- A3000 Power Supply £35
- A4000 Power Supply £59
- A5000 Power Supply £69
- 3.5" Floppy Drive - A3000/A400 £29
- 3.5" Floppy Drive - A4000/A5000 £35
- VIDC (VL86C310) £39
- MEMC1A (VL86C110) £29
- ARM2 8MHz CPU (VL86C010) £20
- IOC (VL86C410) £39
- 256K x 4 120ns ZIP DRAM £6
- Replacement Keyboard Cable £17
- Replacement Mouse Cable £12
- Replacement Mouse Ball £7
- 1.2v NiCad Battery - A3000/A5000 £4
- AA Batteries - A300/A400 £2
- Fan Filter & Clamp £6
- Loudspeaker £3
- A3010/A3020 FDD Eject Button £2

BBC Products

- AMX Super Art (ROM/Disc) £10
- AMX Stop Press (ROM/Disc) £10
- AMX Page Fonts for Stop Press £5
- AMX Mouse & FREE mouse mat £15
- Quest Paint software (ROM/Disc) £15
- ConQuest ROM £12
- Quest Fonts Disc £5
- Quest Integrex 132 printer driver £5
- Quest Tracerball - BBC B/M128 £20
- Quest Mouse Mat £3
- InterWord ROM £36
- InterSheet ROM £36
- InterChart ROM £25
- Logotron Logo ROM £40
- Mega3 ROM - Word/Sheet/Chart £69
- Numerator ROM £39
- Pendown ROM £32
- SpellMaster ROM £40
- Wapping Editor £29
- Wapping Art Disc £10
- Wapping Font Disc 1 £10
- Wapping Font Disc 2 £10
- View 3.0 ROM £45
- ViewSheet ROM £36
- ViewStore ROM £36
- ViewSpell ROM £28
- 32K ROM/RAM Card - BBC B £29
- 64K ROM/RAM Card - BBC B £39
- 128K ROM/RAM Card - BBC B £59
- 16K Static RAM for ROM/RAM Card £8
- 16K DRAM upgrade for ROM/RAM £7
- Battery backup for ROM/RAM Card £3
- Sideways RAM Utilities Disc £5
- Twin ROM Cartridge for Master 128 £6
- Quad ROM Cartridge for Master 128 £12
- Data Duck £10
- Power Duck £5
- Acorn 1772 DFS Kit - BBC B £47
- Acorn ADFS ROM Upgrade £25
- Acorn DNFS 1.20 ROM £10
- Watford 1772 DDFS Kit - BBC B £29
- BBC BASIC 2 ROM £15
- Watford DFS 1.44 ROM £10

BBC Spares

BBC B Spares

- BBC B Power Supply £49
- BBC Keyboard £35
- Keyswitches £1
- Function Keystrip Holder £3
- Serial/Video ULAs £10
- 6502A CPU £5
- 6522A VIA £5
- 6845 CRTC £10
- 6850 ACIA £8

Master 128 Spares

- Master 128 Keyboard £62
- Master 128 Battery Pack £4
- Master 128 Power Supply £69
- Master ULAs £15
- 1772 Disc Controller £10
- 6818 Real Time Clock £12
- Loudspeaker £3
- 65SC12 CPU £12

Please note that due to the lack of brand new spare parts for the BBC some of the above items may be reconditioned

TO ORDER CALL OUR SALES HOTLINE 01582 745555
or FAX YOUR ORDER on 01582 488588

Printers & Accessories

Laser Printers

All Laser printers (excluding Hewlett Packard Oki & Panasonic 4400/4401/5400) include 12 Months On-Site maintenance

• Brother HL630	6ppm	£326
• Brother HL660		£473
• Brother HL1260		£910
• Canon LBP 4i	4ppm	£395
• Canon LBP-8 IV	8ppm	£905
• Canon LBP-8 IIIR	8ppm	£1559
• Epson EPL-3000	4ppm	£389
• Epson EPL-5200	6ppm	£462
• Epson EPL-5600	6ppm	£594
• Fujitsu VM600	6ppm	£499
• HP Laserjet 4L	4ppm	£386
• HP Laserjet 4 ML	4ppm	£734
• HP Laserjet 4MV	16ppm	£1989
• HP Laserjet 4V	16ppm	£1372
• HP Laserjet 4+	12ppm	£938
• HP Laserjet 4M+	12ppm	£1258
• HP Laserjet 4Si	16ppm	£2085
• HP Laserjet 4Si MX	16ppm	£2967
• NEC SuperScript 610+	6ppm	£289
• NEC SuperScript 660	6ppm	£416
• NEC SuperScript 660i	6ppm	£569
• NEC SuperScript Colour 3000	6ppm	£677
• OKI OL-400ex	4ppm	£289
• OKI OL-410ex	4ppm	£399
• OKI OL- 850 PS	8ppm	£1199
• Panasonic KX-P4400	4ppm	£270
• Panasonic KX-P4401	4ppm	£330
• Panasonic KX-P4410*	5ppm	£318
• Panasonic KX-P4430*	5ppm	£479
• Panasonic KX-P4440*	10ppm	£679
• Panasonic KX-P5400	4ppm	£540
• Star WinType 4000	4ppm	£288

*2 years on-site warranty

Laser RAM Upgrades

Type	1M	2M	4M	8M
• Canon LBP-4+	£139	–	–	–
• Canon LBP-4i	£109	–	£279	–
• Canon LBP-8 IV	£119	–	£299	–
• EPL-4100/4300	£70	£110	£205	–
• EPL-5200/5800	£58	£115	£215	–
• Fujitsu VM600/VM4	£57	£85	£149	£299
• Fujitsu VM800	£115	–	–	–
• HP III/IIIP/IIID	£75	£115	£135	–
• HP II/IID	£75	£115	£135	–
• HP IIISI	£57	£85	£158	£299
• HP 4/4M/4P/4MP	£85	£85	£149	£299
• HP 4L/4ML	£75	–	–	–
• KX-P4410/4430	£129	£199	–	–
• KX-P4420/4450i	£75	£115	£135	–
• KX-P4400/5400	£89	£139	£229	–
• OKI OL400e	£99	£118	–	–
• Star LP-8	£138	£225	–	–
• Star LS-5	£75	–	–	–

Laser Consumables

Type	Toner	Drum	Dev
• Brother HL630	£20	£99	–
• Canon/Star 4s	£46	–	–
• Canon LBP-8 IV	£70	–	–
• Canon LBP-8 III	£52	–	–
• EPL-4100/4300	£64	£89	–
• EPL-5200	£85	–	–
• EPL-7100/7500/8100	£117	–	–
• Fujitsu VM600	£85	–	–
• Fujitsu VM800	£115	–	–
• Fujitsu VM4	£29	£149	£89
• HP II/III/IIID	£47	–	–
• HP IIP/IIIP	£46	–	–
• HP IIISi/4Si/MX	£77	–	–
• HP 4/4M	£67	–	–
• HP 4L/4ML/4P/4MP	£44	–	–
• HP 4V/MV	£115	–	–
• NEC 610	£79	–	–
• NEC S60/60P/62P/90/95	£105	–	–
• OKI OL-400/800	£19	£189	–
• OKI OL-400e	£17	£129	–
• KX-P4410/30	£28	£80	£90
• KX-P4440	£32	£108	£115
• KX-P4420	£24	£57	£55
• KX-P4450/50I/51/55	£18	£75	£60
• KX-P4400/5400	£11.50	£69	–
• Qume Crystalprint	£99	£189	–
• Star LS-5	£83	–	–

Laser Accessories

• JetPage Postscript Cartridge - IIP/IIIP	£169
• Postscript Upgrade for LaserJet 4	£270
• LaserJet 4 Lower Paper Cassette	£205
• LaserJet 4 JetDirect Ethernet Card	£339
• LaserJet IIIP Lower Paper Cassette	£115
• Ozone filter for KX-P4420	£9
• Ozone filter for KX-P4450/4455	£20
• LaserJet 4Si Duplex Unit	£475
• Envelope Feeder for LaserJet 4	£199
• LaserJet Font Cartridges	from £45
• LaserJet III FX/IBM Emulation Cart.	£79
• Lower Paper Tray for Canon LBP-4	£98
• A5 Paper Feeder for LaserJet 4P	£85
• Postscript Upgrade for LaserJet 4P	£225

9pin Matrix Printers

• Citizen Swift 90	80col	£114
• Citizen Swift 90C	80col	£121
• Citizen 1200+ Parallel	80col	£90
• Citizen 120D+ Serial	80col	£105
• Epson LX100	80col	£108
• Epson LX300	80col	£88
• Epson LX400	80col	£89
• Epson LX1050	132col	£172
• Epson FX870	80col	£221
• Epson FX1170	132col	£280
• Epson DFX5000+	132col	£1099
• Pansonic KX-P1150	80col	£89
• Pansonic KX-P3696	80col	£259
• Star LC15	132col	£177
• Star LC100C	80col	£89
• Star LC90	80col	£89
• Star ZA200	80col	£255
• Star ZA250	132col	£315

24pin Matrix Printers

• Citizen ABC Mono	80col	£103
• Citizen ABC Colour	80col	£125
• Citizen Swift 200 Mono	80col	£138
• Citizen Swift 200 Colour	80col	£146
• Citizen Swift 240 Mono	80col	£160
• Citizen Swift 240 Colour	80col	£178
• Citizen Swift 24X	132col	£187
• Epson LQ100	80col	£97
• Epson LQ150 Mono	80col	£112
• Epson LQ150 Colour	80col	£158
• Epson LQ300		£140
• Epson LQ570+	80col	£185
• Epson LQ870	80col	£350
• Epson LQ1070+	132col	£282
• Epson LQ1170	132col	£400
• Epson DLQ3000		£672
• Epson LQ3000	132col	£680
• NEC P2Q	80col	£98
• NEC P3Q	132col	£236
• NEC P62	80col	£315
• NEC P72	132col	£375
• NEC P90	132col	£549
• Panasonic KX-P2023	80col	£108
• Panasonic KX-P2124	80col	£198
• Panasonic KX-P1624	132col	£210
• Panasonic KX-P2135	80col	£124
• Panasonic KX-P3626	132col	£259
• Star LC24-20 II	80col	£113
• Star LC24-15 II	132col	£232
• Star LC24-300C	80col	£188
• Star LC240 Mono	80col	£92
• Star LC240 Colour	80col	£103
• Star XB24-200C	80col	£315
• Star XB24-250C	132col	£385

Ribbons/Ink Cartridges

(Manufacturers Original Ribbons Only)

Type	Black	Colour
• Canon BJ10ex/BJ10sx	£14	–
• Canon BJ200/BJ230	£16	–
• Canon BJ300/BJ330	£11	–
• Canon BJC600	£6	£7
• Canon BJC800	£16	£22
• Canon BJC4000	£7	£13
• Citizen 120D+	£4	–
• Citizen Swift 200/240	£4	£13
• Citizen Swift 24X	£8	£18
• Epson LX400/LX850/FX870	£4	–
• Epson LX100	£4	–
• Epson LX1050/FX1170	£5	–
• Epson LQ100	£4	–
• Epson LQ150	£4	£12
• Epson LQ570/870	£5	–
• Epson LQ1070/1170	£8	–
• Epson LQ2550	£8	£16
• Epson SQ870/SQ1170	£21	–
• Epson Stylus Colour	£–	£29
• Epson Stylus 300	£12	–
• Epson Stylus 800/1000	£10	–
• Fujitsu DL1150/DL1250	£5	£7
• Fujitsu DL3600	£6	£12
• Fujitsu B100/B200	£18	–
• HP DeskJet Std Capacity	£–	£21
• HP DeskJet High Capacity	£20	–
• HP DeskJet 310	£15	£21
• HP DeskJet 1200	£20	£21
• HP PaintJet	£16	£18
• HP PaintJet XL300	£16	£18
• Kaga/Taxan KP810/815	£5	–
• NEC P88Q/P32Q	£8	–
• NEC P82/72/90	£8	£14
• Panasonic 1150/1170/1180	£7	–
• Panasonic 2180/23/24/35	£7	£14
• Panasonic 1824/2824	£8	–
• Panasonic KXP3626	£11	–
• Star LC10/LC20/LC100	£5	£9
• Star LC100/200	£5	£11
• Star LC24-20/24-100/24-200	£5	£12
• Star LC24-30	£8	£12
• Star XB24/ZA200/ZA250	£5	£12
• Star SJ48	£15	–
• Star SJ144 Thermal	£18	£18

Inkjet Printers

• Canon BJ10sx	80col	£145
• Canon BJ200	80col	£186
• Canon BJ230	132col	£247
• Canon BJ300	80col	£361
• Canon BJ330	132col	£404
• Canon BJC600	80col	£344
• Canon BJC800	132col	£1065
• Canon BJC820 (Mac)	132col	£1228
• Canon BJC4000 Colour		£270
• Citizen ProJet IIC		£219
• Epson Stylus 300	80col	£138
• Epson Stylus 400	80col	£130
• Epson Stylus 800+	80col	£168
• Epson Stylus 1000	132col	£311
• Epson Stylus Colour	80col	£327
• Epson SQ870	80col	£415
• Epson SQ1170	132col	£580
• Fujitsu B100	80col	£145
• HP DeskJet 320		£165
• HP DeskJet 320 & CSF		£180
• HP DeskJet 540	80col	£POA
• HP DeskJet 560C	80col	£326
• HP DeskJet 1200C	80col	£630
• HP DeskJet 1200C PS	80col	£992
• HP PaintJet XL300+ A4	132col	£1599
• HP PaintJet XL300+ A3		£1769
• HP PaintJet XL300 PS A4	132col	£2568
• HP PaintJet XL300 PS A3		£2719
• HP DeskWriter 520 (Mac)	80col	£199
• HP DeskWriter 500C (Mac)	80col	£260
• HP DeskWriter 560C (Mac)	80col	£387
• Star SJ48	80col	£182
• Star SJ144	80col	£285
• Star Wintype 800C Thermal Colour		£592

Sheet Feeders

• Canon BJ10ex/BJ10sx	£40
• Canon BJ300	£88
• Canon BJ330	£92
• Citizen Swift 24/200/240	£75
• Epson LX400	£69
• Epson LQ570/LQ870	£47
• Epson LQ1070/LQ1170	£89
• HP DeskJet 310	£48
• NEC P20/P220	£59
• NEC P3Q/P32Q	£85
• Panasonic 1170/1180/1123	£59
• Panasonic 1124/1124i/2124	£79
• Panasonic 1824/2824	£128
• Panasonic KX-P2135	£30
• Star LC100	£69
• Star LC24-20	£69
• Star LC200/LC24-200	£69

INKJET REFILL PACKS FOR:

• Canon BJ10ex/BJ10sx - 2 pack	£12
• Canon BJ10ex/BJ10sx - 5 pack	£24
• Canon BJ10ex Cart & 3 Refills	£29
• Canon BJ200 Cart & 3 Refills	£34
• HP DeskJet Std Capacity - 2 pack	£8
• HP DeskJet Hi-Capacity - 2 pack	£24
• HP DeskJet Std Capacity - 5 pack	£14
• HP DeskJet Hi-Capacity - 5 pack	£35
• HP DeskJet Colour - Cart & 4 Refills	£49

Accessories

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*info

Dave Lawrence and Dave Acton present more programs, tips and techie trivia from beyond the PRM.

That sinking feeling

Author: Keith Jordan

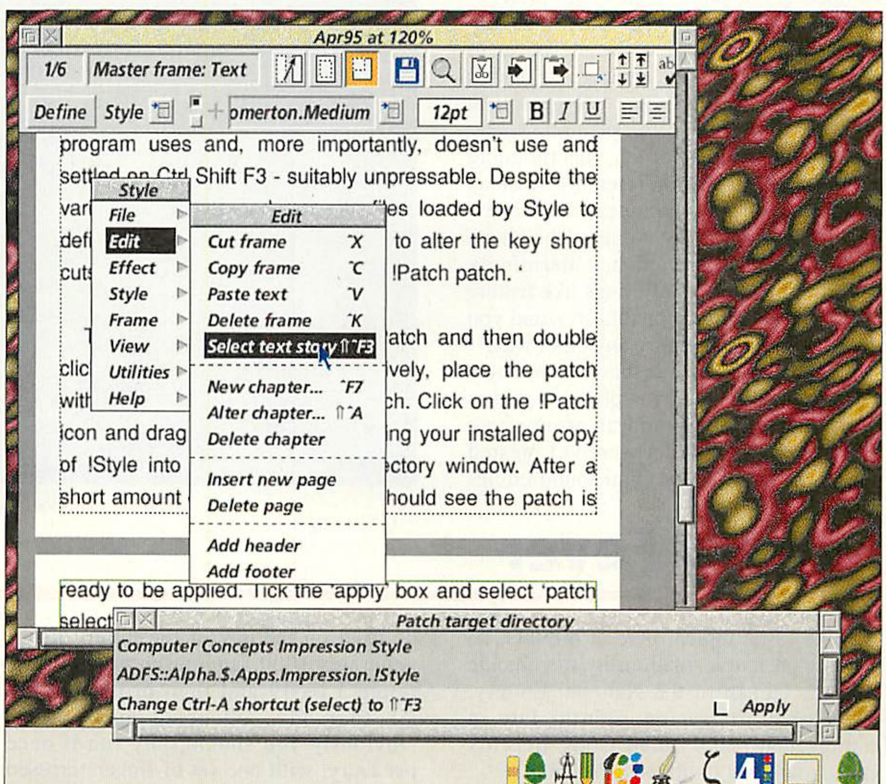
Another first for *INFO from Keith Jordan of Edinburgh – a software patch for *Impression Style* that works with Acorn's *Patch* utility. All RISC OS 3 owners should find a copy of this frightfully cunning application on the Extras disc supplied with RISC OS 3.

As Keith explains: 'How many *Impression Style* owners have been merrily tapping away, only to suddenly see their entire text disappear before their eyes? No, not because of a bug or anything so drastic but because you've pressed Ctrl-A instead of Shift-A, or you're using an Acorn keyboard with Ctrl next to A and just slipped, thus selecting all the text. Then you pressed another key which has replaced the block with a single character. This mistake is not completely fatal as Insert will paste back the deleted block. It is, however, quite alarming and could be nasty if you didn't notice before deleting another block of text somewhere else.

'The solution – either remove the Ctrl-A shortcut completely or change it to something else. I didn't want to lose the facility completely so I scanned the various keys the program uses and, more importantly, doesn't use and settled on Ctrl-Shift-F3 – suitably unpressable. Despite the various messages and resource files loaded by *Style* to define its menus, it is not possible to alter the key short cuts with a trivial change, hence the *Patch* patch.'

To apply the patch, first load *Patch* and then double-click the *CtrlA* patch file. Alternatively, place the patch within the *Patches* directory in *Patch*. Click on the *Patch* icon and drag the directory containing your installed copy of *Style* into the *Patch* target directory window. After a short amount of disc whirring you should see the patch is ready to be applied. Tick the 'apply' box and select 'patch selected' from the menu; *Patch* should do its stuff. Now try loading *Style*, typing some text and pressing Ctrl-A – nothing should happen. For confirmation, try Ctrl-Shift-F3 (and have a look at the Edit sub menu).

Patch can also remove the patch by ticking the 'remove' option in the usual way.



Right thing

Author: Alistair Turnbull

Is it Gourad, or Gouraud, or Gourraud? Guru even? Anyway, if the inventor of the 3D shading technique, or anyone related to him, would like to write in with the correct spelling we will put matters right. In the meantime, here is a fine demonstration of Mr G's method by Alistair Turnbull.

You'll need a fair bit of spare memory to run the demo since it generates an animation. (In fact you'll need to drag the system sprite bar to 1044K or more.) The frames are stored in the system sprite pool, for which Alistair apologises. However, when you see the result you'll forgive this minor indiscretion since the code that does the shading actually does its job remarkably well. Although the animation is played back using sprites, the program isn't significantly slower than real-time when generating the images and I dare say if you have a Risc PC with the very latest ARM in, you could quite easily tweak the code so it writes directly to the screen quickly enough.

Alistair says: 'The problem turned out to be much harder than I thought. This program was an impromptu termination of a more long-term project, and includes a lot of stuff that is not necessary, such as mode-independence and adherence to enough rules to let it write to screen memory in a window.

'It uses integer arithmetic throughout, which turned out to cause no end of problems with different orders of magnitude. It actually inverts a matrix in 64-bit numbers at one point (which isn't pretty).

'The long-term project, which I recommend to anyone with a decade or so to spare, was to write a language to design polygon objects with more polygons than you can do by hand. I was planning something along the lines of ML, incorporating variable assignment by reference (instead of by value). This is because it takes a few hundred kilobytes just to store the shape of the ring (which vanishes alarmingly easily in the interests of things like feature packing and future compatibility), and you would run out of memory any other way.

'I wanted to include basic symmetry elements (such as mirror planes, rotation axes, the three polyhedral groups and something to draw corkscrews), nested extrusions along curves and round circles (with automatic use of Gouraud shading), recursion (to draw snails and trees), and Bezier surfaces, all texture mapped and semi-transparent. If anyone does write it, I'd love a copy.' So would we!

Shading facts

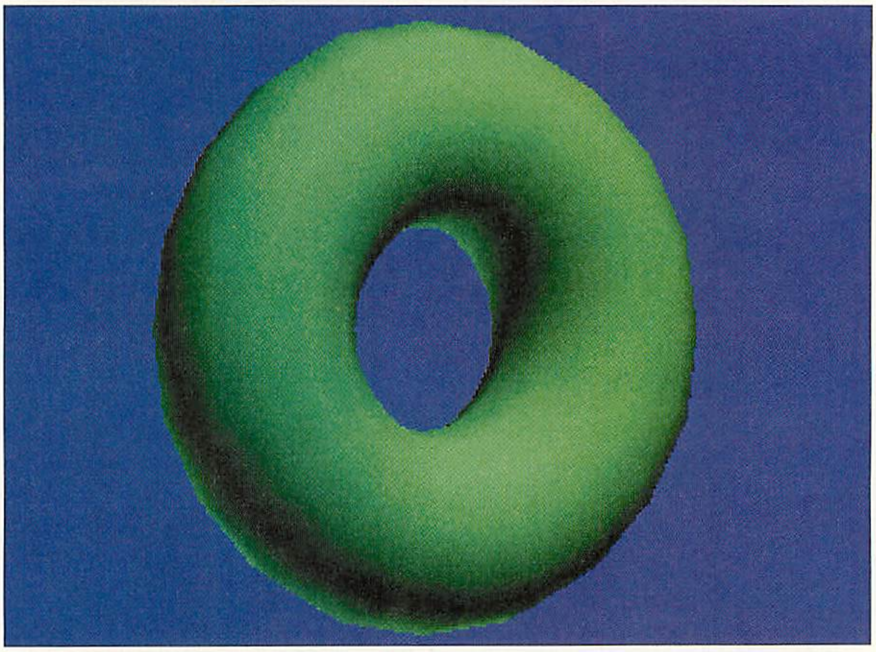
Gouraud shading was invented a good many years ago to help produce smoother-looking 3D images when objects are made up of a finite (and potentially quite limited) number of flat polygons. Like many shading techniques it relies on interpolation.

Firstly, the normal at each vertex on the object is found. This is taken as the average of the normals of all the surfaces which share that vertex. Having found the normals, the intensities at each vertex are then calculated. This is done using whatever lighting algorithms you care to use. (At its simplest, you might have a single light source and the intensity would be a function of the angle the normal made with the position of that light source.)

So for a simple square face, for example, you would end up with four intensities – one at each corner. Then it is simply a matter of interpolating between them. The intensities at points along the sides are found by interpolating between the values at the corners, and the intensities of all the other points in the interior can then be interpolated from those at the sides – simple arithmetic really!

Gouraud shading has the advantage of being quite quick and is effective when you have a lot of polygons that are not at wildly different angles. However, it does have its drawbacks. Genuine corrugations in an object can be 'smoothed out' mistakenly, and errors can occur in animations because the interpolation is carried out in screen (not 'world') co-ordinates. One other point is that highlights – where a particular polygon happens to reflect a light source directly into the viewer's eye – will not be rendered correctly. The bright spot may be missed because the normals at each vertex of a polygon will not be pointing the right way, even though some point in the interior will be.

To overcome these problems, the more sophisticated Phong shading technique is used. Here, interpolation of the normals themselves is performed, rather than of the intensities at the normals. The results are more accurate and highlights work correctly, but the calculations are much harder and the process is a good deal more processor-intensive.



Lottery Fever

Author: Craig Beech

We like to be topical here at *INFO, so we now present a small utility to coincide with the launch of the National Lottery. Well, okay, it's a few months late in coming, but rest assured Craig Beech's *Predict* will pay dividends. Probably.

The small utility, which should ideally be used on the day of the lottery itself, generates 1000 random numbers in the range 1 to 49 and then prints out the six that have occurred most often. Obviously you should only run it once per entry, with one set of fingers crossed and a piece of white heather clenched between your teeth. The program has apparently won £10 for the author, plus another £5 from us for being stupid enough to publish it. (Maybe it does work after all...) We would of course like to hear from anyone who has had any success from *Predict*.

A game for Skölars

Author: Dave Lawrence

You must know us by now – the more bizarre the concept the more likely it is to grace these pages and *Hneftafl* is certainly one of the more odd progs. Apparently it is a Viking board game. What we can't work out though, is when did the Vikings ever get time off from slaughtering the women and raping the cattle to sit down and have a couple of rounds of cribbage, let alone invent the tenth century version of Kensington?

Anyway, on with the game. The following text was found on Arcade Bulletin Board and is apparently by Jan Af Geijerstam. If he would like to contact us we would be more than happy to cough up some readies for the use of his words. Jan starts by saying that he found these details in the magazine of the Swedish Railways, Q1 1992. He translated the text from Swedish to English himself and hopes there are not too many errors!

'In the *Iceland Tales,* different games are described, among them *Hneftafl, (naevbraede).* It was a game for chiefs; the name probably means that it was a "fight without weapons." According to the tales it was just as important to know *Hneftafl* as to be able to fight with a sword. At the historic museum in Stockholm you can see 1000-year old game-pieces from rich graves in Birka, placed together with the necessities of life for the last journey into the realm of death. They were probably used to play *Hneftafl.*

'The rules of the game were unknown for a long time because all information disappeared when chess came to Norden. It was not until an English chess-historian connected the findings from Birka with two written descriptions that it became clear how the game-pieces should be used. One of the descriptions was in a manuscript from 16th century Wales, the other in Carl von Linne's notes from his Lappish journey in 1732. In his notes the Lappish game was called *Tablut.*

'*Hneftafl* is played by two players, one Swedish controlling a chief and eight followers (grey pieces) and the other Moskovit with sixteen soldiers (red pieces). The chief is distinguished from his followers by a large X. The playing area is a nine by nine board with a central castle (the home of the chief) and four Moskovit camps. The initial piece layout is shown in figure one.

'Pieces move like rooks in chess – so no diagonals and no jumping over other pieces. The Swedes have the first move and win if the chief reaches the edge of the board, The Moskovits win by capturing the chief. Opponent pieces are 'taken' by capturing them between two of your own pieces. The chief has no arms and cannot be used to take a piece. In addition, for the Moskovits to win the chief must be captured by *four* Moskovit soldiers. To prevent stalemates, an attack can only be repeated twice, after which the attacker must find another move.

'The castle and camp squares cannot be entered or crossed by any piece, even if the chief or Moskovits have left them. The only exception to this is that Moskovits are permitted to move about within their camp before leaving them for good. While in camp they can still attack and be attacked. Camp squares are also hostile to the Swedish chief and effectively count as an extra Moskovit soldier. This means that when cornered adjacent to two camp squares the chief can be taken by only two Moskovits.'

Inspired by this description we have written a computer version of *Hneftafl* so you can try out this game for yourself. As it stands the computer acts only as a rule enforcer and cannot play itself. Pieces are moved with a drag-and-drop system and the computer will only move pieces to valid squares and will handle piece taking. The current player is indicated in the top left-hand corner of the screen. If you pick up a piece by mistake, simply put it back where it came from and you are allowed to try again. The game has an undo buffer (up to 100 moves) so you can retrace your moves and work out where your strategy went wrong – press U to undo moves and R to redo them.

We believe it may be possible to reach a position from which one player cannot make a move. The rules don't seem to cater for this so we have simply allowed a 'pass turn' by pressing P. Once the game has been won (by either player) press Q to quit that game and reset the board for another go. Note that it is perfectly allowable to undo the winning move.

For speed (of writing) the game does not multitask (sorry). It does, however, work in any (16 colour) screen mode and should select an appropriate one for your monitor. Perhaps someone would like to send in a desktop version and/or a computer opponent. For all Pocket Book II owners, we do have an OPL version which is 90 per cent complete and will put it on the cover disc as soon as we can.

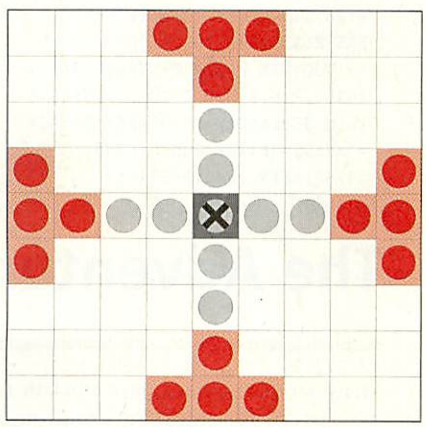


Figure one – the initial board layout for a game of *Hneftafl.*

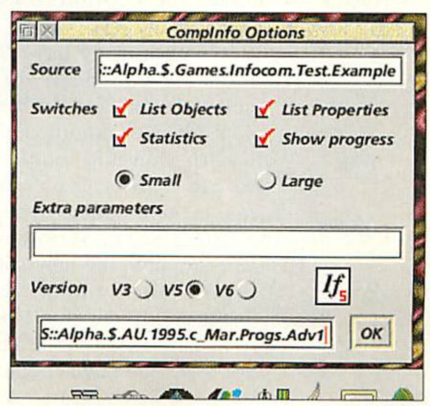
A maze of twisty programs, all alike

Author: Mrs A R Miskin

CompInfo is a desktop front-end for the InfoCom adventure compiler which appeared in the August 1994 issue of *Acorn User*. It was written by Mrs A R Miskin for her son to avoid the irritation of working from the command line. It allows standard drag-and-drop loading and saving and produces its output in a task window.

Just drag games files to the icon on the icon bar and toggle the switches to show what information should be produced by the compiler. Only the simplest options are provided – just the ones we needed – so more sophisticated users will have to revert to the command line or add the options themselves. The extra parameters icon allows for the addition of the parameters suggested by the error messages if any default settings are too small for your game.

The save icon should be dragged to the required location of the saved game or the name can be typed into the writable icon. You are prevented from overwriting the source file – an otherwise common mistake. The game is then compiled and the output displayed in a task window. By default the compilation progress is shown (-x option set).



3DRamFree update

Author: Nick Pearson

As we mentioned last month, quite a few of you had problems with the *3DRamFree* utility we carried in the Christmas 1994 issue. Well, the author Nick Pearson has supplied us with a new version which features on this month's disc and which will hopefully put things right. In general, three problems seemed to be occurring.

Firstly, *Paint* failed to start because of a *Test16bpp* command in the new *!Run* file. This command is specific to the Computer Concept ColourCard. A check is now made for the card to prevent an error later on. Secondly, some people complained that the *RomApps3D* module was still being loaded. The *NewLook* application tries to load this module, so you'll need to make a minor change to stop this happening. Read the *!Help* file for *3DRamFree* before using the patch as this fully explains what to do.

Finally, at least one user experienced unusual errors on shutdown. This is a bit of a mystery to Nick who has not been able to reproduce the problem. Everyone's boot sequence is (unfortunately) unique and therefore everyone has a different set of modules, patches and applications installed after start-up.

Tracking down which bit of code is actually causing the problem can be difficult and can only really be done by removing potential culprits from your boot sequence one-by-one until the problem goes away. If anyone has persistent problems, do let us know. In any case, please read the documentation in *3DRamFree* thoroughly before you start.

Gremlins on the loose

Author: Nick Craig-Wood

Okay then all you clever clogs, here's a one liner fresh off the presses from Nick Craig-Wood. As one liners are few and far between these days, and so you really appreciate the situation, we thought we'd go back to the good old days of type-in listings – so note you *won't* find this program on the cover disc:

```
S=&39F47AC:E=&39F78DC:O=65536:
SYS6,129,0,&FF TO,V:IF V<>
&A5 ELSESYS&42701,%1000,
-1 TOQ:DIM R Q,P O:SYS&42701,
%0100,R,S,E-S,P,O TO,,,,,U:A$="
<Wimp$ScrapDir>.":B$=A$+"b":A$+
="a":C$="Filer_Run ":SYS8,
10,A$,&FF9,,P+8,P+P!4+8:
SYS8,10,B$,&FFF,,P+P!4+8,
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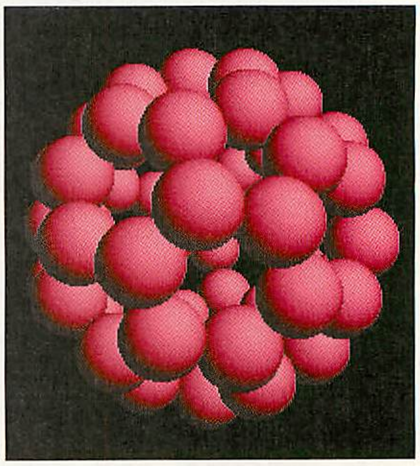
Type this program in – all on one line with no Returns – using *Edit* (having created a BASIC file) or using the Good Old BASIC Editor or even, shock horror, nothing but the BASIC prompt. Note the spaces – don't put in any extra or the line won't fit, and don't miss any out or you'll probably get some very unhelpful error messages. Once typed in and saved, simply run it by double-clicking.

Why have we gone to all this trouble to make you type it in? Well, you've got to guess what the program will do *before* you run it!

C60

Author: Alistair Turnbull

If you thought C60 was a just a popular length of cassette, think again. Alistair T's ballsy demo is a very smooth and pretty example of the genre so we thought you might like to see it. Move the mouse to alter the depth/position of the cluster of ray-traced spheroids. Press the buttons too, if it makes you feel good – it won't do any harm at least. And if you really want a challenge, try counting how many balls there are to see if there really are sixty.



The Adventures of Tintin'

Author: Matthew Broch





Many moons ago (August 1994 in fact) we carried the latest incarnation of a multi-purpose desktop toolkit type thing called *BIO*, and Matthew Broch of Oxford has provided a *BIO* module called *DrawTint*. It's a sort of *ChangeFSI* but for *Draw* files, enabling you to manipulate the colours used therein.

If you already have *BIO* then all you need do is merge *DrawTint* with the existing *BIO* modules. Put the program and templates file into *!BIO.Library* and merge the new sprites by loading *!BIO.Library.Sprites* into *Paint*, dropping the new sprite file onto the window and saving again. If you didn't get a copy of *BIO* first time around, fear not. We have included the 'shell' again with *DrawTint* on the disc. Once installed, bring up the setup window and set the percentage of red, green and blue to be added to (or removed from) the colours in the *Draw* file. Other options allow conversion to monochrome and inversion of colours. There is also a rather bizarre psychedelic option which resets the colours to random values – always a winner at parties.

The original purpose behind this utility, Matthew tells us, is to make pretty notepaper. In fact, it does this extremely well. 'To achieve a rather pleasing effect, take a pretty piece of clip art and drop it into *DrawTint* with the R, G and B values all set to ten per cent and the Invert option selected. Print the results onto some notepaper and admire.'

*QUIT

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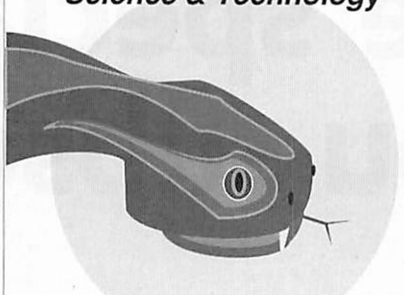
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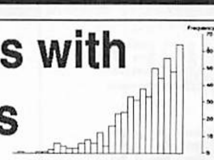
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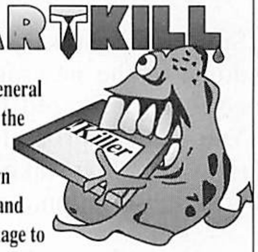
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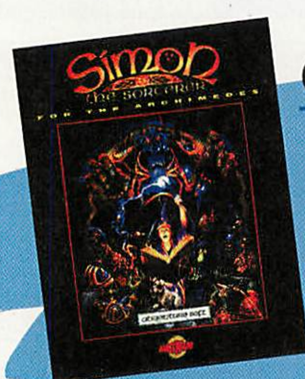


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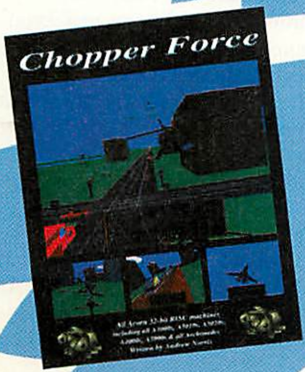
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The Moxon Interview

STEVE HARRIS

> **We reckon there are about 600-odd titles on the Acorn that can use Concept keyboards**

Bill Shankly once said: 'Football isn't a matter of life and death: it's more important than that.' Steve Harris, managing director of The Concept Keyboard Company, would agree. Get onto the subject of Portsmouth FC and you're guaranteed an in-depth conversation, as long as Pompey won last weekend. On the other hand, if they lost...

A parallel in the computer market could be 'Design isn't a matter of life and death', and The Concept Keyboard Company is a prime example of how good design produces popular products. In the two-and-a-half years since Steve joined the company, it has launched nine standard products and received four design awards, and its influence stretches far beyond the family of Concept keyboards it has been making since its inception. Anyone involved in special needs or education will be familiar with the membrane switch keyboard you can overlay with cards to produce a friendly input system, but Concept makes all sorts of input devices, from British Rail teaching tools to systems for ordering sets of false teeth.

'The original idea behind the keyboards was to provide a low-cost alternative to the QWERTY keyboard,' says Steve. 'It's proved popular too: to date we've shipped over 133,000 units, with about 85 per cent of these going to Acorn systems.'

There is a problem though. If you mention the Concept keyboard to most people, they'll go 'it's that thing kids can use with computers', but there's absolutely no reason why the keyboards should be classed as purely educational.

'One of our biggest customers is a major life insurance company,' explains Steve. 'They have a system whereby they take down the details of a potential client – non-smoker, under 65 and so on – and put the relevant overlay onto the keyboard. They then press a button and up pops a life insurance quote on the spot. It's so much quicker than conventional keyboard and mouse input.'

The main reason Concept's products are so flexible is that they've been designed for customisation. British Coal uses Concept keyboards to control its coal plants, and to change the way a plant works. It's much cheaper to change the keyboard overlay and alter the software than to re-design a dedicated system – and, of course, having a keyboard with only the keys you need speeds up data input considerably.

The next generation of keyboards will be even more usable: Concept is looking to include infra red and RF links, so the keyboards don't need cables to connect to the computer. It's all part of designing better man-machine interfaces, which is essentially what The Concept Keyboard Company does.

'We once had a virtual reality glove,' remembers Steve, 'which had switches on the fingers. You could trip the switches by pressing your fingers together or touching a wall, so you could do multimedia presentations by clicking your fingers in the air.'

The company has also looked at touch-screen technology as an input method, but according to Steve the technology has a long way to go compared to laminated membrane keypads, especially for industrial uses. But that's not to say Concept isn't looking at other interesting new ways of creating human-computer interfaces – the research and development team is full of exciting ideas. We'll be seeing analogue keyboards with sliders and switches, and a waterproof QWERTY keyboard which can withstand some serious knocks – it can even be used underwater. And that's just for starters.

'We are a full service manufacturing company,' says Steve. 'We take products from initial concept through research and development right through to manufacture: all the tools needed to make Concept products are on-site in our factory.'

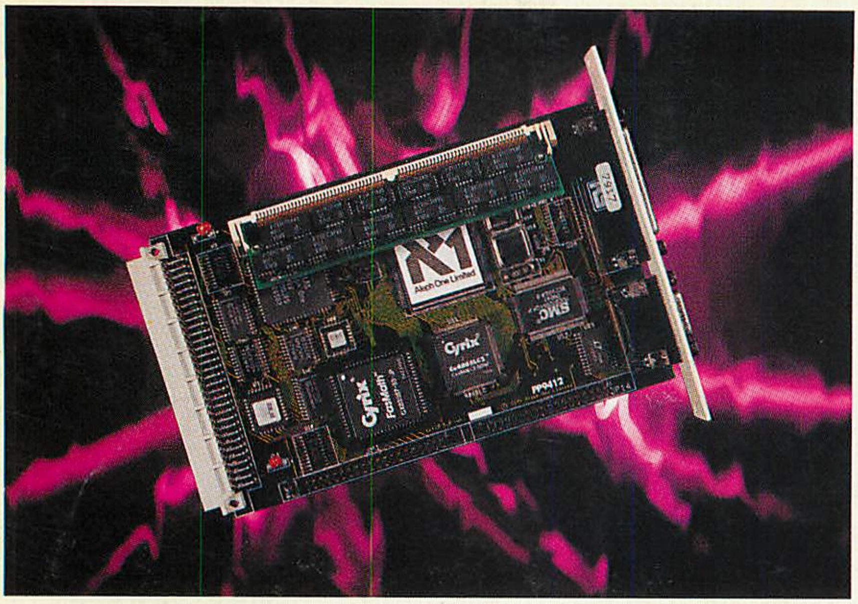
But education is still Concept's biggest success story, and with the new batch of products it should continue to be so. The largest educational sales are on the Acorn platform – though the PC's market share is increasing – and by far the largest number of Concept keyboard-savvy software packages are available on the Acorn.

'We reckon there are about 600-odd titles on the Acorn that can use Concept keyboards,' says Steve. 'That compares with fewer than 100 on the PC, and fewer than 20 on the Mac.

'We are committed to developing new products and technologies for use in education. Take the Informatrix keyboard (which has 4096 separate keypads) with a CD-ROM, for example. You can program each of the keys to access a part of the CD-ROM, so not only do you not need to use the mouse and normal keyboard, but you can access any part of the disc instantly.'

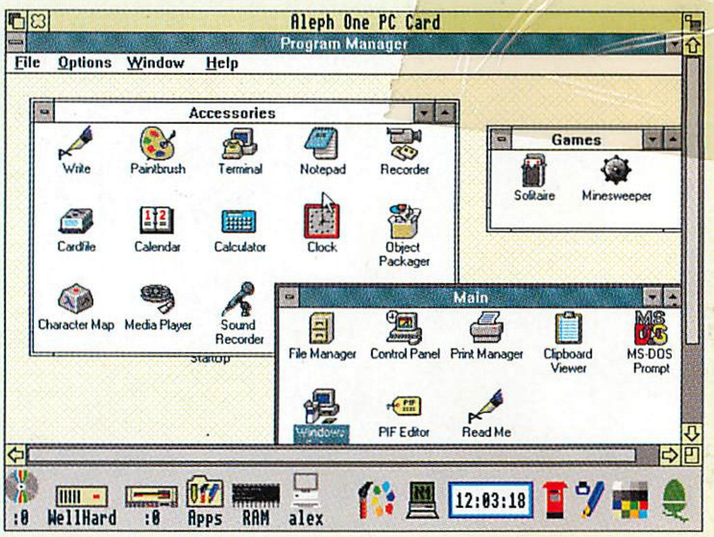
So The Concept Keyboard Company will be with us for some time, not only in education, but also in the general computer interface market. As far as the future of computer interfaces is concerned, Concept has a clear strategy to keep staying ahead.

It looks like Steve could teach Pompey a thing or two about staying ahead... AU



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